THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

VOL. II. CHICAGO, MAY 3, 1884. NO. 18.

ORIGINAL ARTICLES.

THE PHYSICAL AND HEREDITARY NATURE OF VICE.

BY U. P. STAIR, M.D.

The question as to whether the basis of moral states, which find their expression in conduct, are to be sought for in existing brain activities, pathological or physiological, is one which is taking a more or less leading place in modern scientific thought.

Stripped of all its theological associations, and viewed solely from a scientific standpoint, to say nothing of its legal bearings, the question becomes one of no little importance.

Is there, then, a pathological or abnormal basis for vice to be found in the brain of the so-called criminal classes?

The first point of importance to be noted is the claim that, lying at the bottom of those perturbations of conduct which characterize these classes, and which constitute their chief or sole cause, is to be found a lack of proper brain development, and that this physical defect is the constant heritage of these classes, through hereditary transmission. Thus, it is a very common form of the argument to treat the relations existing between vice and crime and a lack of mental culture, as inseparable, and always as that of cause and effect. Moreover, there is a manifest tendency to regard physical diseases of other organs than the brain as also causes of moral perturbations, so that, as a logical consequence, the educator, but very largely the physician and sanitarian, are henceforth to be held responsible for the moral, as well as the physical delinquencies of the race.

Now, we wish, as briefly as may be, to inquire whether these claims are true; whether, for instance, common observation of the social facts around us will warrant us in accepting the doctrine that ignorance, simply, from a lack of brain development, is the cause of the vice and crime so prevalent in our midst.

In the first place, it must be admitted that a very large class indeed of the best people, morally speaking, of our own country, as well as across the water, are far from being cultured or educated people. Especially is this true in the rural districts. Here, and often amongst the lowliest and least cultured ones, are to be found the moral bone and sinew of our land; whilst it is no less an undeniable fact that no insignificant number of our great criminals are from the educated and cultured classes. There are cultured villains as well as grossly ignorant ones. It follows, then, that mental culture solely, though associated with its consequent brain development, as a standard of moral rectitude, is wholly worthless. The main question is, Is there brain power enough to discern vice from virtue, right from wrong, with strength of will to choose between them? This, it would seem, covers the whole ground. The relation of cause and effect, then, between ignorance and crime, is largely a forced one. On the contrary, it is far more likely that they are children of the same parentage, namely, poverty and degraded social position. A constant struggle for existence begets carelessness in moral distinctions. In the same struggle is to be found, also, a fruitful source of the enforced ignorance which is so common an associate.

Then, again, in respect to the hereditary aspect of vice, are we warranted by the facts of daily observation in regarding moral traits, or even mental peculiarities, as being capable of hereditary transmission? We know it may seem idle, to many, to open this question. But it is not a question to be answered in the interest simply of a preconceived theory. The question is one of fact, and we are endeavoring to see if the facts of daily observation lead unmistakably to this view, or whether they cast doubt upon it.

We have no disposition to inquire into the ultimate nature of heredity. It may be sufficient to remark, however, that the speculative theories of Mr. Darwin and others, wherein they would imply an absolute *material* nexus between parent and offspring, are entirely too vague for any practical, or even scientific value. It is coming to be recognized that heredity probably does not involve a material transmission at all.[1] It is more likely that the type or plan of organization upon which one or all of the different tissues of the body are built up, carries with it all that there is embraced in the term. For example, Prof. Formad, of Philadelphia, believes, and with good reasons, that a defective organization of the connective tissue lies at the foundation of scrofula and tuberculosis. For the same reason, we may regard some physical defect as constituting the tendency, also, by which certain mental diseases are transmitted. It is a common error for those whom we think exaggerate the influence of heredity, in biological processes, to seize upon cases of the rarest exception as evidence

[1] Richardson, Diseases of Modern Life, p. 30

in favor of their views, while the vast majority that oppose are passed over in silence. Thus, Mr. Darwin refers with evident gratification to an instance recently sent him by an American correspondent, where a man with traumatic enlargement of the tips of both thumbs transmitted the peculiarity to various branches of the family line. However, it should be remembered that if the instances where accidental deformities were never transmitted at all could all be recorded, they would doubtless be as infinity to one. Besides, it is quite probable that the defect here said to have been transmitted may have been due to the abnormal type of tissue organization which results in phthisis and its associated "clubbed nail" condition.

The same method of reasoning is also pursued by many of those who are now engaged in the investigation of mental and moral perturbations. Thus, a recent writer unhesitatingly declares that "It is a demonstrable fact, that children of illegitimate parentage are peculiarly liable to become addicted to vice and crime, as a result of an hereditarily defective moral sense."[1] To this we must demur, most decidedly, until the "demonstration" is forthcoming. On the contrary, we have in mind at the present hour, at least a dozen or more of the offspring of such parentage, and not one of them shows the least more vicious or criminal tendencies than children of legal unions. In fact, some of them exhibit an unusually scrupulous regard for moral distinctions. It would seem, as well, that the doctrine of transmitted intellectual peculiarities can scarcely be sustained by common observation. Certainly, there has been but *one* Homer, Shakespeare or Milton; but one Cæsar or Napoleon, Phidias, Michael Angelo, Demosthenes or Webster, while numberless weaklings, throughout the history of the past, have held their crowns only by force of arms. If heredity prevails in the realm of intellect, why was the greatness of these names born with these particular individuals, and above all, why did it so utterly perish at their death?

The further claim, upon which so much is based in recent times, that the present bulk of brain and consequent mental status of man, has been acquired only through the transmitted experiences of the race, through ages of time, is just now being sorely tested. The Australian Bushman, who has been heretofore regarded as so low in the scale of humanity, that he had no idea of a God, and the extent of whose mentality consisted in his being able to count to the number of four, has recently, by the influence of Christian teaching, been raised up to the enjoyment of a civilized home, in which the sewing-machine and cabinet organ play their usual part; and that, too, in the short space of ten years' time.[2] We feel at liberty to thus trespass upon what may seem to be unscientific ground, for the reason that the writer from whom we just quoted suggests, from his point of view, that moral delinquencies may be quite as amenable to correction through the influence of medicine, as through that of the church.

In returning to speak of the claim that in the vicious and criminal classes there is an "atypical" or abnormal brain development, corresponding to the moral condition, let it be remarked that this abnormality, if it exists, must consist, grossly speaking, in quality, rather than in quantity. We believe that it is now nowhere maintained that brain mass, simply, at least within certain limits, is to be considered a standard by which mental capacity is to be judged. Neither can any particular *form* of brain be essential to vigorous and healthy mental action, as is conclusively shown by Dr. J. C. Dalton in the New York *Med. Journal* of March 8, 1884. Hence, any change in position or direction of certain gyri or fissures, or number of convolutions, could have but little weight in determining the question. When we remember, further, that it is only the most profound dsseases of the nervous system, associated with which are also grave general disorders, that show any pathological lesions whatever, the possibility of demonstrating the existence of vice in the subject by the use of the scalpel becomes extremely improbable—indeed, after speaking with great force and clearness upon this point, Dr. Spitzka declares that only in paretic dementia, with organic disease elsewhere, "does the autopsy approximate the dignity, from every point of view, of a scientifically positive test.[1] If, then, such grave troubles as mania and melancholia present no appreciable lesions whatever which can be discovered by the closest scrutiny, is it at all likely that a physical basis for the far more occult moral manifestations can be laid bare by dissection?

Conceding for the moment that there is an atypical brain development lying at the bottom of vice and crime, let us inquire along what particular lines shall improvement be attempted, and what particular methods are to be adopted, in order to antidote the vicious brain? Will an appeal to the intellect simply be sufficient? No doubt the higher brain is the organ both of the intellect and the moral sense. Will an education which appeals to the intellectual faculties only, carry with it moral growth and strength also? Intellectual growth alone only changes the character and social standing of the criminal. Ignorance and the lowest forms of vice are associated. Culture and the higher crimes, such as forgery and embezzlement, are on equally as good terms. We are well aware that it is fashionable just now, to sneer at moral influences in shaping human conduct. Man is a creature of circumstances. His mental and moral energies are but the reflex of the activities of his nervous system, and that is as the current physical conditions make it. We have just had the "startling" conclusion forced upon us, with a "dogmatism" equal, at least, to that of the "moralist" or theologian, that "Inebriates are the result of physical causes and conditions; that they are grown and manufactured as much so as cotton and wool, and the machines to work them into fabrics."[2] But, on the other hand, when the "inexorable power" of heredity is being appealed to, all known physical law is set at defiance. Mental and moral qualities, which possess no appreciable physical equivalent, are transmitted, as accumulated experiences, so much in weight avoirdupois, so that

[1] G. Frank Lydston, *Chicago Med. Jour. and Exam.*, Feb., 1883.
[2] See report of Moravian Mission for 1881.

[1] Insanity, page 100.
[2] *Journal Amer. Med. Assoc.*, Jan. 5, 1884, p. 5.

Mr. Spencer declares "that thus it happens that the European inhabits from twenty to thirty inches more brain than the Lapman," and Maudsley that "the true thief is born and not made," and M. Ribot that the passion for gambling may even be acquired by the fœtus *in utero*, while "moral anæsthesia" is transmitted by a single genetic act, and the delicate and almost transcendental impress which constitutes the essence of heredity is still grossly spoken of by some authors of high repute as "seeds" and "germs" with as much assurance as though they were objects of daily observation and manipulation.

It is to the unfortunate criminal classes, however, to which is applied the law of heredity thus rigidly interpreted, and it is likewise to them that is denied the benign influences of proper moral training, which has been, as we think, of immeasurably more consequence, as a cause of their low moral and intellectual status. We have ventured to doubt that moral traits are by any means as uniformly transmitted by heredity as is commonly claimed. We are not deterred from this view, even though Mr. Spencer declares that "If any one denies that children bear likeness to their progenitors in character and capacity, if he holds that men whose parents and grand-parents were habitual criminals have tendencies as good as those of men whose parents and grand-parents were industrious and upright, he may consistently hold that it matters not from what families in a society the successive generations descend." It is plain that Mr. Spencer ignores here, one of the most important factors in the problem, namely, moral training, the home influence and the precept and example of parents and associates upon the tender sensibilities of the child. This thought is so vigorously and aptly expressed by a recent French writer, Mr Alfred Fouille,[1] that we cannot do better than to give his views at some length. After speaking of the theories of Mr. Spencer and Mr. Darwin relative to the debasement of society through the influence of heredity, he says: "In fact, the law of mental and moral heredity, which is their principle, is much more vague and loose than the law of physical heredity. What is the meaning of the unprecise expression 'a society lowered by the artificial preservation of the individuals least capable of taking care of themselves?' Does Mr. Spencer mean that parents, in the habit, for example, of soliciting at the charitable institutions, will beget children endowed wilh the innate disposition to go to the same institutions? England certainly offers a spectacle of this kind of poor who are assisted from father to son by the parishes. * * But whose fault is it? Is it not the fault of the bad education received by the children rather than heredity of temperament?

If those children were brought up with the children of a lord, would they exhibit an innate propensity to beg or to be assisted by others? We believe generally that Messrs. Spencer and Darwin, as well as Messrs. Jacoby and Ribot, attribute too great a part to heredity, too little a one to education and circumstances." This, then, would seem to embrace the whole field of argument. What is applicable here to the poor and degraded classes of England, is equally applicable to the so-called criminal classes, not only there, but in our own country also.

It may be further observed that the most recent interpretations of leading alienists tend to obliterate entirely the line of demarkation between sanity and insanity. But certainly if sanity is but a relative term only, if it is not a standard or fixed mental condition, then all attempts at a logical discussion of the question in hand may as well be abandoned at once. But we think we are fully justified in assuming that this healthy standard exists. Then, given a healthy brain, whether selected from the Australian aborigines, or the Caucasian branches of the race; whether from the slums of London, New York, or Chicago, and place its possessor under the earliest and most favorable moral influences, and there is certainly very little to show, even despite the power of heredity, why the highest ethical results may not accrue to which the race has yet attained.

In view of the foregoing observations, then, it is maintained:

First, that ignorance is not a necessary cause of vice; that the amount of wrong doing, as a result of ignorance, is infinitely small when compared with that indulged in from a wilful disregard of the moral code.

Second, that at the present stage of investigation of cerebral pathology, it is scarcely to be expected that anything but negative results would follow any serious effort to demonstrate a physical basis for vice in the brain, by the use of the scalpel and microscope; and,

Third, Following upon this, and in perfect harmony with it, observation and experience fail to establish the claim that vice and crime are qualities capable of being transmitted by heredity to any such extent as to constitute a distinct and definite class in human society; and, above all, that there is a *moral* force in the social world, to which, in its sphere, heredity is wholly subservient, which is as positive and potent in its influence as that of gravitation in the physical universe, and he who would teach sociology and ignore the former, is as unsafe a leader to follow, as he would be who should attempt to teach physics and ignore the latter.

[1] *Popular Science Monthly*, January, 1883, p. 314.

PARALDEHYDE, SUGAR AND GERM DISEASES.

[Read before the Baltimore Academy of Medicine, November 20, 1883.]

BY J. R. UHLER, M.D.

The substances that I am about to describe are interesting alike for their properties and suggestiveness, since they belong to a class of bodies that, through fermentation and degradation, are closely allied with alcohol and acetic acid. Paraldehyde was first employed by the Italians, and if we can trust accounts in the journals and individual experience, it is a very useful addition to the list of antispasmodic

and sleep-producing agents. In both the concentrated and dilute state it smells and tastes somewhat like sweet spirits of nitre, but when a drop is placed on the back of the tongue, a more pungent, musty, and bitter sensation will be experienced. The odor from its vapor quickly fills an apartment, but it seems to evaporate more slowly than chloroform or ether. Its chemical formula is $C^6 H^{12} O^3$, and, as the name indicates, is either a more condensed form of, or is very similar to, dehydrogenated alcohol. At ordinary temperatures it is a colorless liquid, neutral or slightly acid to litmus paper, and boils at 225° Fahrenheit. Its specific gravity is ·998, and at 52° F. it dissolves in eight parts of water. Paraldehyde is usually given largely diluted with water, and passes unchanged from the body by way of the lungs, the breath smelling very distinctly of it. The dose is from ʒss to ʒiiss, and the effect usually proportionate to the quantity administered. In cases of melancholia, accompanied with sleeplessness, the larger amount is frequently required, but the best plan is to commence with ʒss, and gradually increase until its effects are visible. The sleep occasioned by this agent is not usually so profound as that induced by choral, but when the latter causes unpleasant effects, or the patient has to use a sleep-producer for a long time, paraldehyde is a very efficient aid. It does not cause excitement in the early stage of its action, nor is the heart interfered with, and altogether it appears to be a safer remedy than other hypnotics. To produce sleep during fevers it is very useful, and may have an advantageous effect upon the duration of some cases by modifying the cause. The distress of the opium eater is mitigated by it, alternated with chloral, and in hysteria it is at times invaluable. I have used it since last July as a hypnotic in a case of what might be termed dread of sleep, and also in very obstinate wakefulness from melancholia, accompanied with suicidal tendencies. In the first condition, ʒss acted as well as the same quantity of chloral, and upon awakening there was neither depression, nausea, or other unpleasant effects. The case of melancholia had been using chloral once or twice nightly for more than two years in ʒss or ℈ij doses, though on two occasions as much as an ʒj was taken on her own responsibility, without producing death. So large a quantity caused much irritation of the stomach, as well as vomiting, and this without doubt saved her life. Very obstinate eruptions also followed the abuse of the drug, and disintegration of the red-corpuscles seemed to take place in spots under the skin, resembling purpura. The eyelids, and tissues in the neighborhood of the lower ones, became distended with yellow serum, and a squamous skin disease, accompanied with diarrhœa and great prostration, set in. No albumen or tube-casts were found in the urine, and upon the withdrawal of the drug the urgent symptoms gradually disappeared. Half a drachm of paraldehyde would sometimes make this patient sleep for two hours, but generally four or five times that amount was required. I have also given it in phthisis, measles, neuralgia, diphtheria, spasmodic croup, asthma, and in a case supposed to be whooping-cough, with the most prompt and gratifying result. Other sufferers from pertussis have been greatly benefited, and have had the number of paroxysms much diminished, and I deem the drug worthy of further trial in hypnotic doses in this very obstinate affection. In Bright's Disease, epileptiform convulsions, and inflammation of the upper part of the spinal cord, paraldehyde may do harm, as it seems to "act first upon the cerebral hemispheres, and then extends its influence to the medulla and cord." An overdose is said to "suspend the action of the medulla oblongata and respiratory centers, and after these the heart." I have tried it internally on infants of three, six, and twelve months; upon children, adults, and in extreme old age, but have never seen any harm occur except when there was already some stupor, which it seemed to increase. The drug will, without doubt, prove useful in rheumatism, gout, prurigo, chordee, hysteria, chorea, hiccough, hepatic colic, muscular twitchings, and many diseases where spasm is an important symptom. Dropped upon an abrasion of the wrist, it smarted like alcohol, but appeared to have little effect upon the healing of the sore. Inhaled in small quantity, with free access of air, in phthisis, diphtheria, and spasmodic cough, it sometimes caused drowsiness, and seemed to excite a slight burning sensation in the throat, but otherwise produced no unpleasant effects upon the glottis or lungs. Alone or alternated with tincture of veratrum viride or chloral, it is worthy of persistent trial in tetanus, as the physiological action of paraldehyde appears to teach that good might be expected in that condition, and it is known to be antagonistic to strychnia. Some experiments that I have tried seem to indicate that strong paraldehyde has antiseptic properties resembling the substance from which it is made. A piece of raw beef kept in the pure material shrivels, hardens, and whitens, but does not perceptibly decay, and under the microscope shows an appearance somewhat like that which alcohol or acetic acid produces.

A similar piece of raw muscle placed in equal quantities of paraldehyde and water, behaves in a corresponding manner, but at the point where the two liquids meet, pale yellow globules are visible to the naked eye, that float about in a film and look like fat.

Fragments of raw beef were also suspended from the bottoms of corks in bottles, so as to be surrounded by the vapor of pure paraldehyde and paraldehyde mixed with water, and seemed at moderate temperatures to undergo little or no decomposition. They became harder and darker than similar muscles immersed in strong and diluted paraldehyde, and smelt very distinctly of the drug when removed from the bottle; but at the end of five weeks, though much shrunken, had not otherwise perceptibly changed. Placed under the microscope at this time, the muscular fiber resembles in most respects that which has been kept in strong alcohol. In the cold concentrated condition, paraldehyde dissolves a small quantity of cholesterine, and other fatty constituents of gall-stones, affording most beautiful crystals for the microscope. Urine mixed immediately after its passage with one-third its bulk of paraldehyde, at the expiration of six weeks is still acid to litmus paper.

Microscopic examination on the second day showed crystals of oxalate of lime, and now it contains the same, with a few masses of triple phosphate. There is some sediment in it that looks a little suspicious, but I have not found any vibrios as yet, nor this there any free ammonia.

Paraldehyde mixed with sterilized grape sugar solution in an inverted test tube, and subjected to the proper temperature, does not cause fermentation in the course of six days. Yeast mixed with an equal quantity of paraldehyde, does not ferment cane or grape sugar solution in four and six days, respectively, as I have proved in the following manner: A number of test tubes, after washing, were purified by boiling in water, and when cool enough, were immediately filled with solution of cane sugar, that had also been boiled. Into these, at 70° F., some yeast that had been kept in paraldehyde for twelve hours, and then allowed to evaporate without heat, was placed, and the tubes were inverted in more of the sterilized cane sugar solution. At the end of twelve, twenty-four, thirty-six, forty-eight, and every twelve hours until the termination of the fourth and sixth day, they were examined, but no carbonic acid was formed. The same experiment was performed many times in a more perfect manner with raisin water, sterilized by heat, the yeast and paraldehyde being added in equal quantities after it had cooled, but no fermentation occurred. More dilute preparations of paraldehyde and yeast were also tried in various manners, with week raisin juice that had been boiled, until at last a point was reached where the sugar fermented. With small quantities of yeast and less paraldehyde, results were often contradictory, as germs from the atmosphere during the long time required, are likely to get in the sugary fluid where the inverted tubes stand, set up fermentation, and thus deceive. A portion of the yeast also diffuses itself throughout the liquid, and thus gives less gas in the tube than it ought. These difficulties were finally overcome by using cotton wadding that had been boiled to close the mouth of each tube to keep the yeast in, and the tubes, when full, were immersed in clean mercury. As the tubes containing wadding are hard to turn upside down without admitting air, this plan was finally abandoned, and we were satisfied with simply inverting them in clean mercury. To determine whether the yeast that had failed to ferment with the large quantity of paraldehyde, had been killed or was merely delayed in its action by the presence of the drug, of which the solution strongly smelled, it was diluted with some fresh sterilized raisin juice, and again put into test tubes, inverted over mercury and allowed to remain during four days, but it did not form carbonic acid. The same solution was diluted still further and tried again, but failed entirely to give off gas, and it was not until we had used it many times that we were enabled to get a feeble effect, showing that most, if not all, of the germs were killed. Yeast was likewise smeared around the interior of a bell-glass containing air, and subjected to the fumes of the drug placed in a saucer beneath it, for periods varying from six minutes to twenty-four hours. That under the influence the shortest time suffered least, but all of the specimens, when mixed with sugar, sooner or later fermented. The majority were greatly delayed, and a few, where the contact was shortest, seemed to be accelerated, but as it is almost impossible to get the same number of active yeast plants in each tube, comparative results, except after many hundreds of experiments, conducted at the same time, are not to be relied upon. Another inverted jar, after being smeared on its interior with yeast, was placed over a saucer containing water, on which a small vessel floated, holding paraldehyde. By means of a rubber tube this jar was filled several times with air from the lungs, and the whole was then set aside for twelve hours. At the end of that time the yeast was mixed in tubes with grape sugar solution and allowed to act on it. No effect was produced for thirty hours, but shortly afterward traces of carbonic acid became visible, and gradually increased. Yeast was also placed in one end of an open glass tube, and paraldehyde in the other; through this the breath was taken for half an hour, so as to drive the paraldehyde vapor, and air from the lungs over it, and the yeast was finally put in grape sugar solution to test its activity. At the end of twenty-four hours a single bubble of gas showed that fermentation had begun, and five hours later it was fully established, the gas filling the tops of the inverted tubes. The object of these experiments was to imitate the condition of yeast in the trachea and lungs, and see what effect paraldehyde would have upon it there. Altogether, though not yet through with the investigation, the following conclusions seem warranted.

1. Strong paraldehyde either destroys entirely or greatly delays the fermentation of yeast.

2. Its activity seems to approach that of the substance (alcohol) from which it is derived, therefore less than 20 per cent. in a fluid will not entirely prevent fermentation.

3. A certain amount of time and contact is required, hence it is not quite so active in the gaseous as in the more concentrated liquid condition.

4. Ammonia is not given off from urine in which it is dissolved during five weeks.

5. It dissolves cholesterine and other constituents of gall-stones, but not so well as ether or boiling alcohol.

6. It hardens muscle lying in it or subjected to its vapor, even in the presence of water.

If paraldehyde acts in the system as it seems to do elsewhere, it is evident that, while in the body or being eliminated, that it must exert some influence upon the tissues or foreign living bodies which it touches, and if the contact be sufficient to kill or retard the development of certain kinds of bacteria or yeast plants, then such diseases as depend upon their presence ought to be modified or prevented. That bacterial diseases occur, is now generally admitted, and that modified yeast plant ones are also met with in man and animals, from analogy seems highly probable, but whether we shall call these effects diabetis, diphtheria,[1] phthisis in its earliest stage, embolism of

[1] I am not ignorant of the bacillus tuberculosis, but think that there may be an earlier stage, due to the overgrowth of cells, yeast plants, etc., as suggested by Salisbury, Cutter, Formad, and others.

the liver and kidneys from the small particles sticking in the capillaries and pores, giving rise to yellow atrophy and nephritis, of yellow fever in man, or pleuro-pneumonia in the lungs of cattle, must be left to the future. At present it will be well to cautiously try paraldehyde, both in the stomach and by inhalation, for pneumonia, bronchitis, hay fever, syphilis of the throat or nose, influenza, catarrh, and all spasmodic chest diseases, and if cholera, malaria, yellow fever, diphtheria, typhus, small-pox, scarlatina, measles, or any other contagium, enter the system through the stomach or air-passages, there is a possibility that this drug or certain modifications of it, when used promptly, may destroy, atrophy or change some of the specific germs locally, and thus prevent the full development of the disease. Do not think that I expect too much of this drug, or that it will render harmless or destroy all kinds of germs, for this is hardly possible, since each species thrives under special conditions of acidity or alkalinity, best suited to itself. But if it, or any germ excrement, will retard the growth of one single form in any given part of the body, so as to render the yeast plant nearer the size of a vinegar fungus, and the latter more like bacterium, or teach us to control germs by other germs, we shall be fortunate indeed. So far I have used paraldehyde in four cases of measles, that ran a very mild course, with scarcely any eruption, but as this may have been a coincidence, and not the effect of the medicine, we must wait for increased light. To obtain this, the drug should be studied, not only practically at the bedside, but systematically on living animals in connection with urea, cholesterine, leucithin, uric acid, bile, and the refuse products of the system, remembering that paraldehyde may do harm as well as good, and that it forms a modified link or part of a link in the great chain of fermentation and degradation products, that start from life and sugar, and go on through alcohol, acetic, lactic and butyric acids, to end in ammoniacal decomposition and death. Bearing in mind also that it is not as a general antiseptic that it will prove most useful, but as a local one, directed to a single or few parts of the economy, and liberated unchanged in a volatile form from the lungs. The importance of this latter information cannot be over-estimated, since the list of bodies that act there is small indeed, and the number of deaths from diseases of the lungs more than equal to those from any other cause. Not only as physicians and hygienists are we affected, but as eaters and men having dominion over the brutes, and I pity the person who can tranquilly see cattle stamp and look imploringly for aid, without a desire for something to break up germs in their lungs. Self-interest, therefore, as well as humanity, will sooner or later compel us to utilize all knowledge of fermentation, and the refuse products of the system, in a more complete manner than we have done heretofore, and not leave the best practical results of our laboratory work in the hands of the brewers, candy makers, picklers and old women.

An examination into the constituents of the canners and jelly-makers' trade, as well as the structure of our common garden fruits, shows that nature and art both throw up barriers against the entrance of minute organisms by the formation of a more condensed covering of the can or rind, and it is only when these are broken that fermentation takes place. The human body also, by its skin and membranes, performs the same function, and in disease, by the throwing out of lymph during inflammation, endeavors to limit it. Many of the white tissues also appear to be protected from breaking down too quickly by a minute quantity of that most insoluble substance, *cholesterine*, and this may be *its* greatest use in the economy. Hardening, therefore, the coagulation of albumen, deposit of fibrin, and such like processes, are the means used by nature to keep germs passive, and it is very interesting to note that nearly all of our powerful antiseptics act in a somewhat similar manner. Thus, the bi-chloride of mercury and carbolic acid both coagulate, while table salt, acetate of potash, glycerine and sugar draw water from the parts, and alcohol is a condenser of tissue used from time immemorial. If paraldehyde can be added to the list as a local hardener for certain internal parts of the body, or if its study as the modified excrement of alcohol, and relative of acetic acid, will lead to the use and discovery of other excrementitial substances to act on tissues or specific germs in different parts of the body, and thus produce either an excrementitial or restorative treatment of disease, it will be a boon indeed. What we need is *not only new*, or *more positive knowledge* of the *sizes* and *habits* of *germs*, but a better *appreciation* and *utilization* of the *facts already known*, and it is strange how blindly we grope with the light all about us. To give but one instance, look at the yeast-food sugar. Ever since man was formed it has gratified the palate of the eater, and yet, strange to say, as a therapeutic agent, except in combination with soap for boils, and to render medicines pleasant, it has been almost entirely ignored. This, also, is the substance that has been longest employed to prevent the products of the garden from spoiling, and every housekeeper knows that good preserves are kept by plenty of sugar. Were the profession asked which is the most powerful antiseptic, one would reply, corrosive sublimate, another carbolic acid, iodine, arsenic, or chromic acid, but I would say sugar, and why? Because it can be used internally, as often as we please, alone, or together with other substances, without poisoning or danger, and if this, combined with pleasantness, is not an advantage, I would like to know what is? I have to thank these reflections upon paraldehyde, and a Baltimore physician, for the stimulus that gave rise to the thought of the therapeutic importance of a large quantity of sugar. One night, in a society, it was stated that a mixture of quinine grs. xii, muriate tincture of iron ʒj, sugar water ʒiv, that had been recommended to cure diphtheria, had failed in two cases. The author, who was present, said the prescription had neither been compounded nor used exactly as he directed, but had been employed in too thin a solution, which would not stick to the throat, and that strong, simple syrup should have been the vehicle. This made me think that it was not the quinine and iron, after all, that had done most of the good, since they had disappointed us in so many cases, but the

thick, sugary solution, in combination with the muriatic acid, acting like the saccharine matter in the old lady's preserves, preventing fermentation and degradation. If such be the fact, it would be well to give the plain or acid sugar treatment a fair trial in external ulcers, affections of the vagina, bowels, and erosions of the uterus, as I have done, and thus ascertain the value of this harmless agent, that both *starts* and *stops fermentation* in accordance with the quantity present, and, learning from diabetis, use it internally for the prevention and cure of purpura and allied hæmorrhagic conditions where there is a want of coagulability of the blood. It would likewise be judicious, while searching for new causes of disease and strong agents to destroy them, to reflect upon the porosity of the body, and ask ourselves which are the more hurtful at any given time or place, dead or living germs, and how, when killed, are they to be removed without destruction of tissue.

If we coagulate, necrosis may ensue, and if nothing is done, a similar result from rapid growth will very likely follow. The fact that most of the zymotic diseases produce death through the liver and kidneys is a proof, if germs have anything to do with it, that very minute particles are clogging these smallest spaces in the human economy, and if they fill up pores of like capacity, they or their progeny must be of similar size. The uniformity of the effects also seems to show that the specific character of both rod-like and spiral bacteria does not consist so much in any poisonous quality, as in the fact that they are mechanically of the best form to cause a deposit of fibrin and fill up certain pores in Peyer's patches or elsewhere[1], and thus do harm. If this be so, anything that will enlarge, temporarily fill up, or contract pores, or cause germs to become sluggish, smaller or greater, through starvation or overfeeding, will be useful. Applying these principles to diphtheria, for example, we would not only give teaspoonful doses of thick sugar solution in combination with the muriated tincture of iron every half hour, day and night, to temporarily close pores, impede motions, starve bacteria and acidify the fauces, but paraldehyde and alcohol internally as strong as they can be borne, to act upon them in the lungs, trachea, and other parts that are harder to reach. We would thus determine clinically the value of thick syrup, acid and this drug, and be prepared to use or abandon as nature, when interrogated, directs. The trials that have hitherto been made in diphtheria, seem to indicate that sugar and muriated tinct. of iron, when freely used, prevent fetor, and paraldehyde appears to limit extension to the wind-pipe, but may do harm by increasing stupor when nephritis is present. More severe cases, however, must be treated, and many comparisons be made, before we can venture to give positive opinions of this drug, or answer the questions involved in such a subject as the starvation and keeping above hurtful germs by the employment of excrements that will not nourish or stable substances that they cannot readily pull down; but we have commenced, and that is something. If the fermentation of yeast and formation of aldehyde, joined with memories of the old lady's preserve jar, can help us continue, or suggest plain paths for others to follow, then the sweet things of our childhood will become preserves indeed, when they help to save a human life.

[1] This will explain why some persons take contagious diseases, and others with different sized pores do not. It also shows how when all the proper sized pores have been destroyed, second attacks of the same disease become impossible.

A CASE OF JAUNDICE WITH FATTY EXCRETIONS.

BY J. M. SWIFT, M.D., NORTHVILLE, MICH.

Mrs. B., aged 41; bilious temperament; subjected for some years to occasional attacks of jaundice; active habits; of medium stature, very obese, weighing 185 pounds; sterile, hyperæmic rather than anæmic, digestive function uniformly perfect, some little dyspnœa attendant upon active exercise, but general health has been usually good. Intellect is active, bright, vivacious, and always hopeful; avocation, house-wife, and peripatetic music teacher, both riding and walking a good deal. The lipogenesis is the only apparent indication of deficient oxidation.

This lady was taken with an "attack of jaundice," ten weeks ago, usual symptoms; constipation, clay-colored stools, nausea, slight headache, pain in the region of the liver and under shoulder-blades, itching of the skin, dizziness, and "faint-feeling." No fever, except an occasional slight pyrexia lasting for a few hours early in the attack. I was called to see her in the seventh week of the disease. Prescribed mercurials with rapid favorable results. Her husband informed me that she had passed "two pot-fuls of tar and dark coffee grounds!" I dismissed the case after two visits, which was then rapidly convalescing; natural stools; yellow tinge of skin and conjunctivæ disappearing. The patient was up and about the house, good appetite, and "felt all right." I left her March 22. April 5 was called again to see her. She had taken a severe cold, and also over-eaten, as I was informed and believe. All the previous symptoms were present, except no increase of temperature above 99½°, the pain and nausea not severe, but breathing a little difficult, and icterus very marked. Vegetable alteratives, podophyllin leptandrin, dandelion, etc., were resorted to, resulting in bilious stools, green in color, and copious. Mixed with these alvine excretions there were concretions as large as a large filbert, and of all sizes smaller down to a grain of rice, of what had every appearance of tallow.

Doubtless the aggregate of these in three days would weigh four to six ounces, and at this time there are small amounts occasionally passing her bowels. This fatty substance is unmixed with fæces, but has a greenish hue, and under the glass exhibits some cholesterine. No food containing fat has been taken for weeks by the patient. The clay or *putty* stools have given place to a more healthful appearance, though still green much of the time. The urine is loaded with bile, and floating upon the surface are innumer-

able oil globules, some of them very large. The secretion of the kidney is scanty, but not remarkably so.

The patient at this writing is comfortable, but not improving satisfactorily.

Is there anything peculiar in this case?

As would naturally be expected, the patient is much thinner now, but no unusual wasting is apparent. Appetite fair, temperature normal, and no acceleration of the pulse; patient also rests well.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

ON THE ABSORPTION OF NEUTRAL SALTS IN THE STOMACH.—Dr. W. Janorski (*Revue Médicale de Louvain*, and *Bulletin Général de Thérapeutique*) has made a series of experiments upon this subject and upon man, which led him to make the following report (*Zeitschrift für Biologie*):

1. The absorbent power of the human stomach is not the same for all salts; it varies according to the chemical composition of the saline substance which is employed.

2. The acid carbonates undergo the most rapid absorption, the chlorides the most feeble. The sulphates occupy a place between the two.

3. The difference in absorption is more pronounced the longer the solution remains in the stomach.

4. The presence of acids in the stomach increases the absorption (probably by the formation of acid salts) and makes more evident the difference in absorption which exists between the different salts. Carbonic acid is particularly active; on the contrary, an alkalinity of the contents of the stomach retards the change in the contents.

5. The presence of chloride of sodium in the gastric juice does not accelerate the digestion, nor increase the gastric juice; it exercises, on the contrary, a negative influence.

6. The quantity of hydrochloric acid which is secreted becomes greater in amount, according to the increased alkalinity of the saline solution, and to its longer stay in the stomach.

7. The introduction of distilled water into the stomach causes the secretion of an acid liquid (hydrochloric acid) which is the more marked in its acidity, according to the low temperature of the water so introduced.

8. When a salt undergoes chemical dissolution in the stomach, its basic and acid elements are not absorbed in accordance with their respective weights of combination.

9. One hour after the introduction of a pint of a saline solution into the stomach, a certain quantity of liquid still remains, which contains some of the salt; whilst in a half hour after the introduction of the same quantity of distilled water, the stomach contains no fluid.

From these observations, certain practical considerations are reached by Dr. Janorski, viz.:

1. It is most advantageous to administer salts in the form of acid carbonates, or with carbonic acid in excess; in fact, the absorption occurs more rapidly, the irritation of the mucous membrane is less, and the stomach empties itself most effectually. All the experiments of Dr. Janorski, with the aid of mineral waters, rich in CO^2, confirm this in every respect.

2. The introduction into the stomach of alkaline liquids diminishes the absorption of the salts and retards digestion, while producing a secretion that is greater in quantity than after the introduction of other solutions.

3. The introduction of acid substances into the stomach favors, on the contrary, the absorption of its contained matters. The use of acids, particularly of soda water and other acid drinks, seems therefore indicated, particularly in an overloaded stomach.

4. The presence of chloride of sodium in the stomach, does not seem, according to these experiments, to present that advantage for gastric digestion that has been attributed to it. This salt does not produce an increase of the secretion of the gastric juice, but rather of the peptones, and it does not contribute to a more rapid digestion. It is worth noting, however, in considering stomach digestion, that here the contents of the stomach are submitted for a longer time to the influence of the gastric juices, as the stomach empties itself slowly, and the antiseptic action of the chloride of sodium deserves to be taken into consideration in this connection. Whenever it seems advantageous to prolong the presence of a liquid in the stomach, and thus prolong its action upon the gastric mucous membrane, it would be useful to add a certain quantity of chloride of sodium to the liquid, or to render it alkaline; the mechanical functions of the stomach would probably be lessened, under these circumstances, which is an important point in cases of irritability of that organ. Inversely, the mechanical activity of the stomach is excited under the influence of acids. On account of this diminution of the mechanical functions of the stomach, is probably founded the property which certain drugs possess in quieting the pains of the stomach in certain cases of cardialgia, such as chalk, the carbonate of magnesia, of soda, and other carbonates and oxides.

5. The introduction of the chlorides in a neutral solution does not increase the gastric absorption, neither does the use of the neutral carbonates, which are either not absorbed at all, or absorbed only in proportion to their transformation into chlorides (in presence of the secreted hydrochloric acid). It is of importance to note that the chloride of iron is a salt which is absorbed with difficulty. When we consider, on the contrary, that the acid carbonates are of all salts the most easily assimilated, which is equally demonstrated in the acid carbonate of lime of the mineral waters, we must admit that the bicarbonate of iron should be the preparation of all

others of the salts of iron, which would be absorbed the most readily. This is confirmed by the fact that ferruginous waters, rich in carbonic acid, produce, in spite of their small proportion of iron, a greater therapeutic effect, which is more certain, than the pharmaceutical preparations that are given in much larger doses.

6. One hour after the introduction into the stomach of a pint of a saline solution, about a fourth part remains; if the liquid is pure or acidulated water, no traces remain ofter the same lapse of time. So that when we administer medicines in a liquid form, we can readily allow our patients to partake of food an hour later, without any fear that the drug will be diluted or chemically modified, so as to no longer exert its therapeutic effect.

On the Action of Salicylate of Soda Upon the Uterus. — Dr. Balette (*Bulletin Général de Therapeutique*) has found the salicylate of soda in ordinary therapeutic doses to quiet the pains of dysmenorrhœa, by exerting a sedative action upon the central nervous system.

It seems to increase the menses, and in some cases to cause their reappearance. In four cases, the use of salicylate of soda in large doses produced abortion—in two of the cases at the end of a day and a half, and in one case at the end of two months. (?) In five other observations, the drug in moderate doses produced no such result. Therefore, in many cases, the action of salicylate of soda in weak doses has no abortive effect upon the uterus. In his experiments upon animals, this drug had no oxytocic effect.

However, as there are women who are predisposed to abortion, and as experience shows that in large doses the drug has produced abortion, it would be wiser not to give the salicylate of soda in pregnancy, except in special cases, and then to determine with care the degree of tolerance as shown by the patient.

On the Use of Injections of Iodine (Intra-Venous); of Quinine (Intra-Venous); and of Fowler's Solution into the Spleen.—M. E. Ricklin (*Gazette Medicale de Paris*) has given a very interesting grouping of methods as above stated, used in accordance with what he calls parasiticide therapeutics, to bring parasiticide drugs in direct contact with the blood by means of intra-venous injections. He gives the results obtained by M. Vander Heyden in the treatment of certain infectious diseases by intra-venous injections of iodine. The injections were made by the use of a Pravaz syringe. The solution consisted of 7 parts of distilled water, one part of iodine and 2 parts of iodide of sodium, which was injected into the median vein of the arm, which was distended by compression above the elbow joint. These injections were very well borne, but the therapeutic results were not remarkable.

M. Hoffman has been using intra-venous injections of chlorhydrate of quinine in cases of typhoid fever, erysipelas, pyæmia, pneumonia and pulmonary phthisis. The solution used for these injections consisted of alcohol at 450 holding in solution 1 grain of chlorhydrate of quinine for each cubic centimeter of the vehicle. The most minute precautions are necessary to render the injections inoffensive, which renders its use very troublesome, and not warranted by the results obtained. One case is cited of grave typhoid fever. On the fifteenth day of the disease, at 11 A. M., the temperature was 39.3.° In a half-hour a quantity of the solution equivalent to 2 gr. 1. of the salt was injected into a vein. At 12:45 P. M., the patient had a chill; the temperature had gone up to 41.5°. At 4:30 P. M., the temperature was 37.5°; at 9 P. M. it was 35.9°. The following morning it was 37°; in the evening it was 38.6°, and the next day the febrile movement had returned to its original intensity. This hazardous mode of medication never had more than a more or less passing antipyretic effect, which could be obtained by other means without exposing the patient to phlebitis, gangrene or embolism. Two of M. Hoffmann's patients were attacked by spasms after intra-venous injections, but they were not followed by any serious results.

M. Peiper records a case of leucæmia with enormous engorgement of the spleen. He was treated by injections of of Fowler's solution into the spleen, one cubic centimeter for each injection, and to the extent of ten injections during the course of eight weeks. They were well supported, and the spleen diminished markedly in size. Prof. Mosler, under whose direction this treatment was conducted, recommended that it be used only in cases of hard engorgement of the organ, and in cases that are not subject to the hæmorrhagic diathesis. Further to ensure success, the patient should first be submitted to the internal administration of medicines capable of acting upon the contractile tissues of the spleen, and each injection should be followed by the application of ice over the seat of puncture, to be kept up for several consecutive hours. It was undoubtedly owing to the want of these precautions that death occurred in the case in the service of Prof. Kussmaul, where sclerotinic acid was injected into the spleen, in consequence of the penetration of the liquid into the splenic vessels.

M. Ricklin concludes his review of the subject by referring to the experiences met with in injections of preparations of iron, but these have already been referred to in these pages.

OBSTETRICS AND GYNÆCOLOGY.

Rachidian Congestion of Menstrual Origin.—Mr. Oudiné (*Jour. de Med. et Chir.*) has added some observations upon several cases to the discussion on this subject. The rachidian congestion, according to his views, has ordinarily an abrupt beginning, like the cause which produces it. But there must be a distinction made between those rachidian congestions which occur in the adult female during the period of utero-ovarian activity, and those which occur during the menopause. With the first the phenomena occur abruptly as the consequence of sudden cold, fright, etc., with the suppression of the menses. Then follow, after a few hours, and more rarely a day or two, creeping sensations, pains and torpor,

with or without paralysis. With the second these symptoms come on more gradually, during three, four, five months, and longer, after the day when the subject ceased to be regular, and a feeling of discomfort sets in, with pain that is more or less intense at the period which should correspond to the normal menstrual flow. Then disturbances of motility set in, which develop little by little progressively, until the last stage, that of paraplegia. When this is reached it manifests itself most generally by interference with motility and sensibility, rachidian pains, and irradiations of pain in the extremities.

The disturbance of motility is seldom a true paraplegia, but more commonly a simple paresis, which is not permanent but in exceptional cases. It is more marked when the subject is up and about than when lying down, which is accounted for by the accumulation of the serum in the lower part of the canal and the pressure which it exerts upon the cord. The patients drag their legs one after the other, while the feet brush along the ground. The two legs may be affected in different degrees. The anal and vesical sphincters are rarely influenced in the exercise of their functions. The interference with sensibility is generally but little marked, and is shown by formications, and, more rarely, by anæsthesia. One case cited by M. Oudiné had lost completely all appreciation of the existence of the legs. The pains seated along the course of the spine are sometimes extremely intense, and may increase by very violent crises.

The progress of these symptoms is extremely variable. Some subjects exhibit abruptly all these symptoms, and, in the course of a few hours, they pass off. This is noticeable in young women when therapeutic interference has aided nature to restore the catamenial flow. But at the menopause, the symptoms may persist for a long time, for many weeks or even many months. Here the prognosis, which is always favorable in the first form, as relief is afforded during a period varying from several days to a few months, becomes graver. The cure is rarely effected, and the congestion may terminate in softening of the cord.

When it has been determined that the rachidian congestion is the cause of the paraplegia, which is not always easy, for the paraplegia of hysteria presents a marked analogy to this form of paralysis, the proper treatment is to resort to local blood-letting, such as wet cups to the lumbar region, leeches to the vulva to reëstablish the menses if possible, and to the various emmenagogues. M. Desnos prescribes ergot in powder, to the amount of 0.50 centigrammes to 1 gramme a day, with or without opium, according to the degree of tolerance of the patient, to diminish the congestion of the cord.

SURGERY.

HÆMATURIA IN THE RETENTION OF URINE, AND DISTENSION OF THE BLADDER.—Professor Guyon, in his clinic at the Hopital Necker, Paris (*Jour. Med. et de Chir.*), discusses fully the condition so frequently observed in old persons, with retention of urine, where a discharge of blood follows the evacuation of the bladder. He shows that in many of these cases the hæmorrhages are not due to traumatisms, but to an excessive congestion of the vesical mucous membrane.

In one case presented by him this condition was very remarkable; the patient, suffering from retention, had been relieved by the passage of a large sound, which produced a very rapid evacuation. The internal surface of the bladder was of an ecchymotic redness, but the mucous membrane itself was healthy. This vesical congestion is present in all similar cases, and suggests very clearly that, in treating retention of urine, the conditions of the vesicular circulation should not be abruptly disturbed by evacuating too rapidly all the liquid contained in the bladder, as one is always tempted to do. As a consequence of this rapid evacuation, syncope and sudden death have been recorded in very exceptional cases, but more commonly hæmorrhages result, the presence of which are explained by the marked abundance of the vesical venous plexus, which, suddenly relieved of pressure, distends itself forcibly.

The first rule, then, would be not to empty completely the bladder, and not to remove more than half of its contents. To do this properly, the bladder would be emptied slowly and by means of an instrument of small caliber, which would take from a quarter to a half-hour to do its work—that is, where the occurrence of hæmorrhage is to be feared. The accidents produced by this intense congestion may be very rapid and even mortal; at other times they are less grave, and their results may be noted as of all grades, from a cystitis to a pyelo-nephritis. In such cases the cystitis would not be produced by the transformation of the urine, it would depend upon the intense vesical congestion. This, however, would not militate against the use of antisepsis, for in old persons the alteration of the urine takes place very readily. Guyon washes his instruments with boracic acid, and oils them with phenic oil; after using the catheter he injects into the bladder about 150 grammes of a warm solution of boracic acid—4-100. This recognition of consecutive haematuria is very important, not only as regards treatment, but also in prognosis, as distinguishing an organic lesion from a simple disturbance of the circulation.

ON DISTENTION OF THE BLADDER.—In the normal state, the distension of the bladder produces an effect which soon becomes painful and even agonizing if it is prolonged, but it also produces a congestion which extends to the whole of the peri-vesical system. As a proof of this is the semi-erection of the penis which it causes in the old man. The whole venous system of that region, the prostate in particular, is in this congested condition under the influence of over-distension. Another point is that the bladder is but little sensitive to contact, while very sensitive to distension. This is shown very markedly in cases of lithotrity, while under the influence of chloroform. The bladder for a half-hour will support readily the contact of the necessary instruments used in the operation, but if it is distended by the injected fluids it commences to contract. The same thing is noticed in cases of stone. It is astonishing how indifferent the

bladder is to the presence of a stone. M. Guyon is of the opinion that most of those affected with stone in the bladder suffer no pain. It is only in cystitis that contact alone will cause contractions of the bladder.

These facts are important in operations upon the bladder for the removal of stone. If, for example, in such a case, after dilating the canal, and bringing instruments in contact with the bladder, an attempt is made to dilate the bladder by injections, there may suddenly occur serious accidents as the result of this distension. In a case of cystitis, it is natural to suppose that washing out the bladder would relieve the patient, but if the fact is overlooked that the slightest dilatation may result in very serious accidents, a considerable surgical fault is committed. These injections into a bladder which has already made great efforts to empty itself must increase the pain. Under such circumstances M. Guyon uses injections with great reserve, and with many precautions he considers it preferable to commence with *instillations* and gradually to arrive at injections.

Distension is the point of departure for a number of affections of the bladder. The number of cases of cystitis produced by the distention and the retention of urine is considerable, and in all patients where this disposition exists, one cannot be too emphatic in insisting upon urination without delay. The dilatation of old age is gradual, and very different from that of the young subject, where it is often caused by traumatism. This shows that by using very gradual means the bladder can be habituated to distension, and it is in these cases of chronic distension that one sees, as a consequence, the dilatation of all the urinary organs, the ureters, calices, pelves, which are permanent in their character and impossible to relieve.

NEW INVENTIONS.

The Bead Inhaler.—Dr. Benjamin Ward Richardson, in *The Asclepiad*, gives the illustration of an apparatus for inhalation which is shaped like an inkstand, with a neck and regulating cap, through which the liquid is poured into the receiver, and with a mouthpiece fitted inside with a talc inspiratory valve and with an expiratory valve. In the receiving bottle there is placed a string of glass beads, held on a line of cotton wick or floss silk. The beads fill the receiver, and form a free surface for the volatile fluid, without danger of the escape of the fluid except in the form of vapor during the inhalation, hence the name of *bead inhaler*. In changing one liquid for another nothing has to be done but to draw out the beads, to wash them, if necessary, in a little spirit, and, after washing the bottle, to replace them in the bottle. He claims for it the advantages of small size and easy portability, steadiness for standing on table at bedside, readiness for receiving and retaining the volatile fluid, possession of a wide surface for evaporation, easy adaptability to the mouth of the patient in any position, and cleanliness of action.

Ten minims of the nitrate of amyl poured upon the beads yields a charge which, by taking care that the cap closes securely and the tube valves acts correctly, will answer, without losing effect, for twelve hours.

Urethral Toxæmia.—This is a term used by Dr. Maclaren in an article in the *Edinburg Clinical and Pathological Journal*, to designate phenomena which have been classed under the head of gonorrhœal rheumatism, which latter term Dr. Maclaren considers a misnomer, as the phenomena are invariably associated with a specific inflammation of the urethra, and fulfil all the conditions of septic intoxication. He reports five cases in males under thirty-five years of age, in apparent good health up to the time of infection, and in only one example was there any history of previous rheumatic disease.

The systemous infection appeared in two cases on the third day, in two others on the eighth day, and in the remaining case about the third or fourth week after the onset of the gonorrhœal discharge (one case had suffered four years previous from a similar toxæmic attack. No prodroma, the first evidences being slight pain and considerable swelling in one or more joints or bursal sheaths. In four there was a metastatic form, involving a large series of great and small joints. In one it was limited entirely to the knee. There was no relation between the degree of pain and the amount of swelling. Severe persistent pain in one case at the acromio-clavicular articulation, and for nearly an inch over the bones on either side of the joint, indicated a participation of the periosteum in the morbid process. Slight transient redness sometimes was present at the onset, but on no occasion was there shown any tendency to suppuration. Groups of muscles were sometimes for several days extremely tender, and in one case the sclerotic and conjunctiva were injected and painful. Anæmia marked. Temperature never exceeded 103°. In all cases in the morning it frequently fell to 97°, and in one case reached 96°. Urine carefully examined, but no uric acid was found. Although in all the cases the severity of the symptoms was greatly mitigated in a few weeks, in none had they ceased to appear at the end of three months. Treatment simply emperical, viz.: injections of hyd. chlor 1–2,000, or acid carbolic 1–100, counter-irritation to upper part of thigh, rest, local application of flannel, plaster dressing. Tinct. iodine, sinapisms, and many anti-rheumatic remedies were tried, as the alkalies, pot. iod., quinine, colchicum, salicylate of soda, but these latter were without benefit. For the anæmia iron and ergot were given. The medical efficacy of the ergot was not decided.

It has been estimated by various writers that from 1 in 200 to 1 in 400 of individuals suffering from gonorrhœa become the subjects of urethral toxæmia.

For the removal of nævi in patients who shrink from the knife, Dr. Beatty has successfully employed liquor asenicalis, which he applies with a brush night and morning, until ulceration takes place.

THE

Journal of American Medical Association.

PUBLISHED WEEKLY.

THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information, should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

SUBSCRIPTION PRICE, INCLUDING POSTAGE.

PER ANNUM, IN ADVANCE..... $5,00.
SINGLE COPIES..... 10 CENTS.

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made at the risk of the publishers, by forwarding in REGISTERED letters.

Address

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS.

SATURDAY, MAY 3, 1884.

WOMAN'S HOSPITAL MEDICAL COLLEGE OF CHICAGO.—Since our last week's issue, this institution has held its regular annual Commencement exercises in Hershey Hall, in the presence of a fair audience.

Twenty-seven young women received the degree of M.D., and were cordially welcomed into the ranks of the profession by Prof. W. H. Byford, President of the college. The institution is enjoying a fair degree of prosperity, and we are informed that a new college building will be erected during the present season.

LEGACIES TO HOSPITALS AND MEDICAL COLLEGES.—From the Cleveland daily papers we learn that the late H. B. Hurlbut, of that city, left provision in his will that the revenue yielded by his estate should go to his wife during her lifetime, and on her death $200,000 should be given to the Cleveland City Hospital, and the balance of the estate, estimated to amount to $1,000,000, to the establishment and maintenance of a gallery for the cultivation of art in that city.

The same papers announce that Mr. J. L. Woods has donated a liberal sum for the building of an elegant new edifice for the Medical Department of Western Reserve University, while Messrs. H. B. and Oliver Payne have added to the grounds for its accommodation.

Considering the direct and very important relation between the interests and welfare of all classes, and the highest standard of education and training of medical men, it is surprising that more attention has not been given, by men of wealth everywhere, to the endowment of medical colleges and hospitals on such terms as to secure the most systematic and thorough practical training of medical men, on whose attention and skill all must, at some time, depend for relief.

THE REJOINDERS.—As we expected, our remarks on the articles furnished by Drs. Hutchinson and Cronin, have elicited a letter from each in reply, which we cheerfully insert in this number of the JOURNAL. The first serve only to show what we had suspected, namely, that he had formed his estimate of the teaching in all medical colleges by that of the one he attended in the days when Druitt's Surgery was the most recent text-book. Regarding Dr. Cronin's letter we will only ask, if alcohol undergoes either assimilation or combustion in the human system, how does it happen that during its presence, not only the products of combustion, but the sum total of all eliminations, are diminished, and the temperature reduced, if changed in any direction? If the amount which it is claimed disappears in the system and not capable of being directly recovered in the excretions and eliminations, is actually either added to the tissues by assimilation, or oxidized as in combustion, how does it happen that M. Dupré finds something giving all the reactions of alcohol in the excretions several days after the use of the alcoholic liquids has been discontinued? Does not this fact go far to show that the alcohol which apparently disappears in the system is merely held mechanically by its strong affinity for the albuminous elements of the blood and tissues, and is only given up slowly through a period of several days? Finally, if the very general tendency of the human race to use alcohol in some form, is proof of its nutritive and sustaining qualities, how is it about tobacco, opium, etc.? Are they also foods?

SHUT ITS DOORS AND CLOSED ITS BLINDS.—The Joplin (Mo.) Medical College closed its doors before the end of its last college term. Cause—Inanition.

ARE PHYSICIANS ESSENTIALLY SANITARIANS?—In answering this question, the April number of *The Sanitarian* says: "Preventive medicine is at best only taught elementarily in a few medical colleges, and in these as an *addendum* to some other subject deemed to be more important—in *none* systematically as a prerequisite to graduation." This is not quite literally true.

Certainly, in the Chicago Medical College (and, we think, in some others also), there has been a dis-

tinct chair or professorship of State Medicine and Public Hygiene almost from the commencement of the College, occupied by a full professor, attendance upon whose teachings and examinations is as much a "prerequisite to graduation" as upon those of the professor of Practical Medicine or Surgery.

ILLINOIS STATE MEDICAL SOCIETY.—Our readers in Illinois should remember that the next meeting of the State Medical Society will be held in Chicago, commencing on the third Tuesday in May.

SOCIETY PROCEEDINGS.

FIFTY-FIRST ANNUAL MEETING OF THE TENNESSEE STATE MEDICAL SOCIETY, HELD AT CHATTANOOGA, TENN., APRIL 8 AND 9, 1884.

The Medical Society of the State of Tennessee met at the hall of the Iron and Coal Association in Chattanooga, at 11 A. M., Tuesday, April 9.

The Society was called to order by the President, Dr. A. B. Tadlock, of Knoxville. Prayer was offered by the Rev. J. W. Bachman.

The President appointed as a Committee on Credentials Dr. B. B. Lenoir, Dr. W. F. Glenn, Dr. D. D. Saunders.

The Committee retired to act on the names which had been handed in for membership.

Dr. W. F. Glenn being temporarily absent, Dr. W. F. Clary was appointed a member of the Committee *pro tem.*

Hon. Hugh Whiteside, Mayor of Chattanooga, on being introduced, extended a cordial greeting and a hearty welcome to the Society on the part of the city; stating that much good could be accomplished to the State by these meetings, and that he and the citizens of Chattanooga, whom he represented, sincerely hoped to make this a pleasant meeting socially, as well as to aid in its success in a business point of view. His address, though brief, was pointed and eloquent, and was received as a heartfelt, outspoken expression of generous hospitality.

The President returned the thanks of the Society to the Mayor for his cordial welcome, and said that the Society would gladly accept the courtesies of this city, whose people are so well known for their progressive spirit.

Dr. H. L. McReynolds, Vice-President of the Chattanooga Medical Society, and a member of the Committee of Arrangements, then delivered the following address on the part of the local profession:

Mr. President and Gentlemen of the Society:

With pleasure beyond my power to express, I welcome you to-day, not only in the name of our resident members, but in the name of the whole people of Chattanooga, to our thriving and progressive city.

A decade has passed since this Society last convened in Chattanooga, and if there be any here to-day who participated in that meeting in 1874, I doubt if they are able to realize the wonderful growth and advancement this city has made from the mere village then, to the splendid city she now is, and bids fair to attain in the near future. Not that the progress has been unrestrained by flood and pestilence, for she has been visited by both. But, notwithstanding these, on account of her superior railroad and water facilities, her immense beds of coal and iron ore, surrounded by fine farm and garden sites, she has defied adversity.

Six years ago this city was scourged with yellow fever, but, thanks to our noble profession, few lives were lost; and only last year and the year preceding we were visited by small-pox but again I say, thanks to the medical profession, that disease has ceased to be so much of a terror as formerly, having been deprived of its former power to destroy life through the discovery of the immortal Jenner. Notwithstanding all this, to-day our health statistics will compare favorably with any city in the Union.

That the medical profession has, within the last ten years, made more rapid advancement toward the goal of perfection; has investigated further into that most complicated of all machines—man; laid more peace-offerings at the feet of pain-racked and suffering humanity than any other decade preceding it, no one well informed in the history of medicine will deny. And we hope the time will soon come when no disease, however malignant, will be beyond the control of the skilled physician. But we can not hope, with any reasonable foundation for that hope, that the charlatan, with his wonderful pain-killer, discovered in the Wild West, shall ever cease to mount his dry-goods box on the corner; or that the ignorant of our population will ever cease to be gulled and deceived by every quack and pretender who travels through the country.

Hoping, Mr. President and gentlemen, that this meeting will be of great practical benefit to us all, and through us to the afflicted and suffering who have committed themselves to our care, and believing that an exchange of views and experience is the only true way to attain a thorough knowledge and a liberal view of any science, we the more heartily welcome you on this occasion. We welcome you in the name of the medical profession of this city; we welcome you in the name of the people of Chattanooga; we welcome you in the name of suffering humanity, and invite you to the hospitalities of our homes.

The Committee on Credentials then presented the following report of delegates and members in attendance:

Dr. J. Berrien Lindsley and Dr. P. D. Sims, delegates from the State Board of Health.

Dr. Ruth A. French, delegate from the Knox County Society.

Drs. D. D. Saunders and W. W. Taylor, delegates from the Shelby County Society.

G. A. Baxter, Chattanooga; C. C. Fite, Nashville; Jno. Blankenship, Maryville: E. B. Hale, Talbott; P. D. Sims, Chattanooga; A. B. Tadlock,

Knoxville; B. B. Lenoir, Lenoir's; W. F. Clary, Bellbuckle; V. Gibbs, Chattanooga; J. H. Vandeman, Chattanooga; W. G. Bogart, Sweetwater; A. J. Swaney, Castalian Springs; W. M. Vertrees, Nashville; H. Berlin, Chattanooga; W. T. Hope, Chattanooga; Mary T. Davis, Knoxville; W. F. Glenn, Nashville; M. Campbell, Nashville; Duncan Eve, Nashville; Deering J. Roberts, Nashville; J. L. Atlee, Athens; F. B. Sloan, Cowan; R. F. Evans, Shelbyville; W. R. Townsend, South Pittsburg; E. B. Hale, Chattanooga; S. T. Smith, Dunlap; T. J. Ried, Mason: L Y. Green and C. S. Wight, Chattanooga.

The following were recommended for membership, and by unanimous vote, were elected:

Drs. W. Stewart, Rockwood; J. M. Masters, Knoxville; D. H. Lane, Calhoun; J. R. Nankivell, Charleston; W. T. Foute, Lenoirs; G. W. Drake, Chattanooga; D. E. Nelson, Chattanooga; S. T. Smith, Dunlap; E. B. Wise, Chattanooga; J. M. Lasiter, Dunlap; L. B. Dunn, Chattanooga; T. C. V. Barkley, Chattanooga; Green B. Garner, Hillsboro; J. B. Cox, Hollow Rock; Cooper Holtzclaw, J. R. Rathmell, W. H. Beatty, Chattanooga; W. S. Johnson, Morgantown; A. P. Vanderveer, Charles Spencer, Chattanooga; W. L. Stephens, Rockwood; H. H. Loveman, Chattanooga; R. E. Jameson, Apison; E. B. Ketcherside, Jasper.

Drs. J. W. Russey, Rising Fawn, Ga.; E. P. Nicholson, Valley Head, Ala., and D. A. Morse, Oxford, Ohio, a delegate from the Ohio State Medical Society, were extended, by unanimous vote, the privileges of the Society.

The President, Dr. A. B. Tadlock, then delivered his address, which was a lengthy and able paper. The general bearings of medicine and its relationship to the public, and the question of irregulars, and the correction of these evils, were elaborately treated.

The Society then adjourned to 2 P. M.

AFTERNOON SESSION.

The Society was called to order at 2 P. M. A letter and paper were received from Dr. C. E. Ristine, of Knoxville. The paper was entitled "Excitation of the Clitoris," and, on motion, was referred to the Committee on Publication.

By motion the President and Secretary were instructed to send greetings by telegram to the State Medical Association of Alabama, now in session at Selma, Alabama. Dr. Masters, of Knoxville, then read a paper on the Hygiene of the Eye. The paper was referred to the Publication Committee.

A telegram was received from Dr. J. F. Grant, of Nashville, regretting his inability to be present.

The Secretary, Dr. C. C. Fite, of Nashville, then read his report, which is as follows:

NASHVILLE, APRIL 7, 1884.

To the Medical Society of the State of Tennessee:

GENTLEMEN:—Please find attached to this report a statement in regard to the Transactions of 1883, which were well received and sought by the profession in various portions of the country. A catalogue of the books now in the Library of the State Board of Health is also appended. The Board opens their shelves as a depository for the property of the Society. Many valuable volumes have been lost on account of not having a permanent medical library in which to preserve them. The collection is in the bookcase C of the State Board of Health Library, in the State Capitol.

I had the honor of calling your attention last year to the number of travelling quacks in this State. Most of our sister States have, by requiring diplomas and by strict examinations, shut out this horde of vampires, and so they are fattening on our people.

We are maintaining our reputation for hospitality, and open wide our doors and welcome them. The profession is apparently glad to see them, for as a profession we give no word of warning. The daily press of our cities is profusely decorated with their pictures and glowing descriptions of their wonderful skill. Articles are published without being marked as advertisements, and the unwary take this as an editorial endorsement, and swarm like bees about their doors to be deceived and humbugged. I say to you, gentlemen, that we should blush when we read these disgusting laudatory articles penned by the charlatans themselves. We should blush that the proud old State of Tennessee allows them to thus degrade the honorable name of the doctors—that word second to none in the world, when a title of honor and well earned, is daily besmirched and bedraggled by the conscienceless villains. These are strong words, but true ones, as everyone knows.

Nashville has a fine assortment of these light-tongued gentry now plying their trade in our midst, and the profession is apparently indifferent to it.

It is our duty as philanthropists, as citizens of this commonwealth, to tell the people the plain unvarnished facts, and say that these men are unworthy of credit or respect. They voluntarily place themselves outside the bonds of honorable medicine.

We, as a profession, ask no protection; we ask no legislation in our behalf, but for the ignorant masses we should demand protection of our law-makers, and if we unite our efforts we can do it almost without serious opposition. It is true this Society has memorialized the Legislature time and again, but in a half-hearted way; it did not have the vim of determination in it, and we did not stand together. Instead of worrying ourselves about the New York code and such small matters, we should go home to the root of the evil, and make our great work of healing the sick and preventing disease what it really is—the noblest life on earth. This we can do by cleansing the temple of these loathsome worms that now degrade our honorable calling. Some present may be of the opinion that I overdo this. I say, gentlemen, it can not be overdone. There is no medium ground. No compromise can be made. We should state the truth or nothing, and I intend to keep this up until it is done, and I hope to live to see right triumphant. We must throw off the fetters of tradition, and look this living issue square in the face, and do our duty to our people and ourselves.

We are in the woods on this question. We are lagging behind, and as the other States take their position and drive these people out, we receive them, be-

coming the receptacle for the worthless and debased from all parts of this broad country.

Now, gentlemen, in closing, allow me to thank you for the honor you have conferred on me by electing me for three consecutive years your secretary. I am not a candidate for re-election, and would not accept a re-election if you saw fit to so honor me. My other professional duties are so great that it would be impossible to give the time and energy to the office that it requires. With sincere thanks for numberless courtesies, and with grateful appreciation for your confidence, I will retire from a work I love, and would like to continue were it possible to do so.

Faithfully yours,

C. C. FITE, M.D.

On motion of Dr. Lindsley, seconded by Dr. Roberts, the report was received and referred to the Committee on Publication.

Dr. D. D. Saunders, of Memphis, offered a motion to appoint a committee to memorialize the Legislature on the subject of suitable enactments to protect the public from quacks and charlatans.

Dr. Gibbs moved an amendment that the committee to be appointed prepare a bill, after comparison with all the laws on the subject that are obtainable, and that this bill, so prepared, be discussed at an adjourned meeting of the Society, to be held at Nashville, the first Tuesday in October.

Dr. Roberts seconded Dr. Gibbs' amendment, and the amendment was accepted by Dr. Saunders.

Quite a spirited discussson then ensued, which was opened by Dr. Saunders, who, in a pointed and eloquent manner, argued in behalf of action taken by the Society. We can not begin to give anything but a brief synopsis of his remarks, which were received with considerable applause by many of the members. He said, in substance:

Mr. President, the report of our Secretary gives me pain. Can it be possible that we are going to allow these men to disgrace us when we can prevent it? The older members are to blame. What can the younger members do when we, the older ones, are so selfish and indifferent? It is a shame and disgrace to us. Our neighboring States are enacting laws to prevent these vampires from committing frauds on the people. We have not done our duty. I say, gentlemen, we are wrong. Our Secretary made a similar report last year, and again like a trumpeter repeats it, and we should heed the voice.

Dr. Deering J. Roberts, in his remarks, was opposed to any legislative action whatever. He stated that where State laws were in force in regard to quacks and charlatans, the people were no better off than where the statutes were not so encumbered.

Dr. J. Berrien Lindsley spoke in favor of postponing action, and while he was in favor of better organization of the profession in Tennessee, he thought that the proper place to secure this was in the State, county and local societies. He was afraid to invoke legislative enactment.

Drs. P. D. Sims, A. J. Swaney, Duncan Eve, W. F. Glenn, Loveman, and others, participated in the discussion in behalf of immediate action.

Dr. H. Berlin gave some pertinent illustrations of the medical surveillance of Prussia.

Dr. Drake was opposed to legislation.

On motion, the amendment of Dr. Gibbs was laid on the table. Dr. Saunders' motion was then adopted after the amendment had been tabled.

Dr. Saunders moved that there be two members of the committee from East and West Tennessee, and three from Middle Tennessee.

Upon motion, it was decided that the committee report on the following day. The following committee was appointed by the President:

Drs. D. D. Saunders, W. W. Taylor, Memphis; Drs. J. H. Vandeman, H. L. McReynolds, Chattanooga; Dr. R. F. Evans, Shelbyville; Dr. W. F. Clary, Bellbuckle; Dr. J. F. Grant, Nashville.

Dr. Roberts, the Treasurer, then made his report, which was referred to an auditing committee, consisting of Drs. Lenoir, Vandeman and Hale.

The report of the Committee on Publication was then presented by Dr. Roberts, Chairman. The report was received and filed.

The Chairman of the Committee on Changes in the Constitution, Dr. S. F. Grant, not being present, the result of their deliberations was reported on by Dr. Roberts, and the amendments suggested were first considered separately, and adopted with but few, if any, material alterations, and then adopted as a whole.

The changes may be briefly summed up as follows: Abolishing the Censors and establishing in lieu a Judicial Council, composed of the ex-presidents of the society, three of whom constitute a quorum; fixing the time of meeting, when not otherwise ordered, for the second Tuesday in April; changing the assessment from $3.00 to $5.00 as an initiation fee for new members; $2.00 for members in attendance, and $1.00 for members not in attendance.

The society then adjourned until 9 o'clock next morning.

SECOND DAY.

The Society re-convened at 9 A. M., Wednesday, April 9, and was called to order by the President.

Dr. E. M. Eaton, of Chattanooga, presented a paper, "A Study of the Vital Statistics of Small-pox in Chattanooga in 1882-83." By request of the author, the paper was not read, but referred to the Publication Committee.

Dr. Mary T. Davis, of Knoxville, then read a valuable paper on "Hot Water Therapeutics," which was referred to the Committee on Publication.

Dr. Roberts moved that the ex-Presidents, Dr. R. F. Evans and Dr. B. B. Lenoir, personally tender the thanks of the Society to Dr. Davis for her admirable paper.

Dr. H. Berlin, of Chattanooga, then read a paper entitled "Efforts of Therapeutics." Referred to the Committee on Publication.

Dr. Roberts presented a patient of Dr. J. G. Sinclair, of Nashville, together with a brief clinical report of the case, one of a rare and unusual form of eye disease, with the regrets of Dr. Sinclair at being unavoidably prevented from being present.

Dr. R. F. Evans, of Shelbyville, then read an in-

teresting and practical paper on "Eczema," which was referred.

Dr. John Blankenship, of Maryville, then read a paper on "Scrofula." Referred to the Committee on Publication.

The Treasurer, Dr. Roberts, moved that the new constitution take effect after this meeting. Carried.

Dr. Rathmell, of Chattanooga, read a paper on "Hospital Gangrene, with Cases." The paper was referred to the Committee on Publication.

Dr. Swaney, of Castalian Springs, read a paper on "Puerperal Fever." By motion of Dr. Roberts, the paper was referred to the Committee on Publication.

Dr. Vertrees, of Nashville, asked that his paper be referred to the Committee on Publication, as he was too hoarse to read it. The request was granted, Dr. Vertrees giving a synopsis. The paper was on Diphtheria.

The Secretary read the report of the committee to settle with the Treasurer, the Treasurer's accounts being approved.

The following telegram was read, it was in answer to one sent by this Society:

SELMA, ALA.

"We thank you for your very kind greeting and consideration. Our meeting is a large one, and we earnestly hope that the Association over which you gentlemen preside, is in a growing and flourishing condition. T. A. MEANS,

Secretary of Alabama Medical Association.

A telegram from Dr. F. L. Sim, of Memphis, stating that personal illness alone prevented his being present, was read.

Dr. S. T. Hardison, of Lewisburg, read a paper on "Senile Prostatic Diseases."

Dr. Swaney discussed the treatment of the above conditions.

Dr. C. C. Fite requested that he be allowed to retire at one o'clock, as he had to go to Nashville on the first train, and Dr. Baxter was elected Secretary *pro tem.*

All the papers that were read proved very instructive, and provoked a very interesting discussion. They were able and interesting documents.

Drs. F. B. Ferguson, of Rich Creek, and S. T. Hardison, of Lewisburg, were present, and registered during the morning session. Drs. W. C. Ransom, of Farmington, A. B. Robinson, of Chapel Hill, and C. M. Drake, of Knoxville, having also arrived during the morning, and their application for membership having been favorably reported on by the committee, they were unanimously elected to membership.

Dr. T. J. Cotnam, of Stevenson, Ala., was present as a visitor, and invited to a seat in the Society.

The same courtesy was extended Dr. S. B. Wells, of Red Clay, Ga.

The Convention then adjourned until 2 P.M.

AFTERNOON SESSION.

Dr. G. A. Baxter, of Chattanooga, being called upon by the Society, read a paper on "Uncomplicated Spinal Shock," which was much commended by Dr. Saunders, of Memphis, and Dr. Vertrees, of Nashville, and referred to the Committee on Publication.

Dr. Glenn, being called upon for a paper, made an address upon "The McDade Treatment of Syphilis," affirming that in his own experience, it was a complete failure.

Dr. Saunders followed, confirming Dr. Glenn's conclusion.

Dr. Vertrees, Dr. Morse, Dr. Sims and Dr. Glenn participated in a spirited discussion upon the method and administration of mercury in this disease.

Dr. J. B. Lindsley, President of the State Board of Health, read the following communication from the State Board of Health upon the subject of "Vital Statistics:"

Mr. President:—By direction of the State Board of Health, my colleague, Dr. P. D. Sims, and myself have the honor of appearing before you as its representatives. We are charged with the pleasant duty of conveying to you the warm congratulations and hearty good wishes of an important State Board, which owes its existence to the long continued and well directed efforts of your body, and which recognizes the fact that without the cordial and active assistance of the medical profession of Tennessee, its brilliant prospects for high usefulness will prove a mere mirage of the desert.

Indulge me in a brief historic retrospect. At Chattanooga, in 1874, a committee was appointed to draw up a report upon a new constitution, looking to new life and energy in the Society, which had not been keeping step with other intellectual influences in the State. In the Transactions for 1875 we find a very elaborate paper from this committee, in which the advancement of preventive medicine was announced as one of the four great objects to which this association should devote its energies. On page 26 of these (1875) Transactions we learn that at the previous meeting (1874) a committee had been appointed to memorialize the State Legislature to create a State Board of Health. This committee reported through their chairman, Dr. E. M. Wight, that they had drawn a bill covering the wishes of the Society, and had presented the same to the General Assembly for its enactment, but which, they were sorry to say, had failed in its passage to become a law. The Society then adopted the followino:

Resolved, That the chairman, Dr. E. M. Wight, be requested to write carefully the report of the committee on a State Board of Health, for the proposed report of the proceedings of the Society, and that the committee be continued. This eloquent address may be found on pages 42–48 of said Transactions.

At the next session, 1876, we find that the committee on the State Board of Health, through Dr. Wight, presented an exhaustive and lengthy report. This able and elaborate paper fills ten closely printed pages of the Transactions for that year.

On pages 34–36 of the Transactions for the year 1877, we find the report of the committee on State Board of Health, by W. K. Bowling, chairman. We quote from it the result of the above stated patient efforts:

"The State Board of Health of the State of Ten-

nessee is now a finality. We have the Board organized and at work. It has only come into existence because the State Medical Society demanded it. It is your legitimate offspring. We charge you now with its future care, and appeal to you to give it every aid, and the best support in your power."

It is proper to add, that all this time, Dr. J. D. Plunket was Treasurer of the Society, and took a very active part in enlightening the members of the Legislature, and the public, as to the merits of the measure. Hence, in April, 1879, when the board was created, Drs. Plunket and Wight were among the original members, and the former became the first President of the board. Dr. Wight, to the day of his death, was one of its most disinterested and active workers.

The history of the board since then is familiar to the profession. It has made progress. It has retrograded. The great subject of vital statistics must be tackled again and again until a satisfactory law is obtained. Continuous and costly efforts must be made to enlighten the people of Tennessee, until in matters of public health, this, the University State of the South, takes its place alongside Massachusetts and Michigan, as preëminently an exemplar.

Dr. Hope then offered the following motion:

"*Resolved*, That the President appoint a committee of five on the State Board of Health, whose special duty it shall be to aid in the passage by the next General Assembly, of a satisfactory law upon vital statistics." Carried.

Dr. P. D. Sims, of Chattanooga, in an eloquent eulogium, called upon the Society to contribute to the fund for a monument to Dr. J. Marion Sims. This was seconded with enthusiasm by Dr. Saunders. Action was deferred to the night session.

ELECTION OF OFFICERS.

Dr. Hope nominated Dr. D. D. Saunders, of Memphis, for President. Dr. Roberts seconded the nomination, and requested that Dr. Davis be empowered to cast the vote of the Society for Dr. Saunders, which was done, and he was declared unanimously elected. He accepted in an appropriate and eloquent address.

Dr. A. J. Swaney, of Middle Tennessee, Dr. W. T. Hope, of East Tennessee, and Dr. T. J. Reid, of West Tennessee, were elected Vice-Presidents.

A motion to proceed to the election of a Secretary was laid upon the table, as the Society was well pleased with its present Secretary, Dr. Fite, and therefore declined to accept his refusal to serve another term.

Dr. Deering J. Roberts was re-elected Treasurer.

The Society then adjourned to take an excursion in the city and to re-assemble for business at 8 P. M.

At 4 P. M. the delegates adjourned to the Union Depot, and by invitation boarded a special train which had been provided for their use. They visited all the leading industries of the city, including the South Tredegar Iron and Nail Works, Lookout Rolling Mill, and the new Citico Furnace, and each and every one expressed surprise and amazement at the extent and variety of the industrial progress of Chattanooga.

NIGHT SESSION.

The Society was called to order by the President at 8 P. M.

The committee on memorial to the Legislature made a report, of which the following is a copy:

To the Honorable Legislature of the State of Tennessee:—We, a committee appointed by the Tennessee Medical Society at its last meeting at Chattanooga, on April 8, 1884, beg leave to state that from our personal knowledge, the people of this State, which you have the honor to represent, are being imposed upon in body and person, and in many instances permanently injured in health, and even killed, by ignorant and unauthorized persons who call themselves doctors, and who have no diplomas from recognized medical schools, or certificates from authorized medical boards. We deem it our duty to make you conversant with these facts, that you may, as the regular and proper guardians of the peace, happiness, and lives of the people, take such legislative action as may protect your people from this source. So far as the regular profession of medicine is concerned, we wish you to understand that we ask your action not for ourselves, but in behalf of your own people, leaving us to take care of ourselves, which we claim to be able to do.

We would most respectfully suggest in the accomplishment of the above object, that you may partially effect it by passing an act which prohibits the collection of medical fees by any other than a legalized physician.

D. D. SAUNDERS,
J. H. VANDEMAN,
R. F. EVANS,
W. F. CLARY,
W. W. TAYLOR,
H. L. MCREYNOLDS,
J. F. GRANT,
Committee.

On motion, the report of the committee was received, and the committee continued.

The following committee was appointed on Vital Statistics at the request of the State Board of Health:

W. T. Hope, Chattanooga; F. L. Sims, Memphis; R. Cheatham, Nashville; J. B. Murfree, Murfreesboro; J. B. W. Nowlan, Nashville, chairman.

The Judicial Council reported that the name of Dr. R. J. Hoyle, of Farmington, Tenn., be dropped from the roll of membership on account of irregular practices. Dr. Hoyle was expelled, and the Secretary instructed to notify him of the fact.

Dr. W. W. Taylor introduced the following resolution, which was carried:

Resolved, That a committee be appointed on county medical organization, to consist of not less than three members, one from each section of the State.

Dr. H. L. McReynolds, Chattanooga; A. H. Swaney, Castalian Springs, and W. W. Taylor, Chairman, Memphis, were appointed.

The following resolutions were then made and carried:

By Dr. P. D. Sims—That the Tennessee State Medical Society appropriate to the Marion Sims

Monumental Fund the sum of $50, and that the Treasurer of the Society be, and is hereby instructed, to forward from the fund of the Society this amount to Dr. Maury, of Memphis, the custodian of said fund in Tennessee.

By Dr. Townsend—That all members who propose to read papers at the annual meetings of the State Medical Society, inform the Secretary of the Society of the title of their papers, previous to the meeting, and that the Secretary issue a list of such papers in his call for the annual meeting.

By Dr. Gibbs—That the Committee on Arrangements be requested to make arrangements for a three days' meeting at the next regular meeting.

By Dr. W. W. Taylor—That the thanks of this Society are due, and are hereby tendered the city papers, for the very full reports furnished of our proceedings.

By Dr. Tadlock—That thanks be extended to the N., C. & St. L., and other railroads, for excursion rates; also thanks to the Medical Society of Chattanooga, for their work in the meeting.

By Dr. Masters—That a vote of thanks be extended to Dr. J. H. Vandeman for the royal manner in which he entertained the members of the Society on last evening.

By Dr. Vertrees—Anybody who has done anything for the Tennessee State Medical Society, and who has not been thanked, receive the thanks of the Association.

By Dr. Vandeman—That the thanks of this Society are due, and are hereby tendered to Dr. A. B. Tadlock, for the zeal and impartiality with which he has presided over our deliberations during this session.

The following committees were appointed by the President:

Delegates to the American Medical Association—Drs. Duncan Eve, Nashville; W. F. Glenn, Nashville; C. C. Fite, Nashville; J. B. Lindsley, Nashville; R. A. Hardin, Savannah; W. A. H. Coop, Friendship; J. G. Sinclair, Nashville; G. B. Thornton, Memphis; D. D Saunders, Memphis; A. J. Swaney, Castalian Springs; R. F. Evans, Shelbyville; W. T. Briggs, Nashville; W. R. Townsend, South Pittsburg; W. M. Vertrees, Nashville; A. B. Tadlock, Knoxville; J. H. Vandeman, Chattanooga; H. Berlin, Chattanooga; G. A. Baxter, Chattanooga; W. G. Bogart, Sweetwater; H. H. Loveman, Chattanooga; and Deering J. Roberts, Nashville.

Committee of Arrangements—Drs. W. F. Glenn, chairman, Nashville; A. Morrison, J. W. Maddin, J. R. Buist, N. D. Richardson, Nashville.

Committee of Necrology—Drs. Thos. Lipscomb, Shelbyville; Thos. Menees, Nashville; P. D. Sims, Chattanooga; R. W. Mitchell, Memphis; J. M. Boyd, Knoxville.

Committee on Credentials—Drs. J. B. Lindsley, Nashville; G. B. Thornton, Memphis; A. B. Tadlock, Knoxville.

Committee on Business—Drs. V. Gibbs, E. M. Eaton, Chattanooga; S. B. Boyd, Knoxville; F. Bogart, Sweetwater; J. B. Murfree, Murfreesboro.

Committee of Publication—Deering J. Roberts, T. A. Atchison, C. S. Briggs, Nashville; W. W. Taylor, Memphis; C. C. Fite, Nashville.

The Society adjourned to meet on the second Tuesday in April, at Nashville.

SOCIAL FEATURES OF THE MEETING.

The reception on the evening of the 8th, at the handsome residence of one of the Society's former presidents, Dr. J. H. Vandeman, corner of Fifth and Chestnut streets, was a pleasant event.

The banquet given by the citizens of Chattanooga, at the hall of the Iron and Coal Association, on the evening of the 9th, after the adjournment of the Society, was a sumptuous feast, and heartily enjoyed.

The toasts on the occasion were apropos, and developed a raciness of wit and an eloquence that gave a glorious finale to a most successful meeting.

STATE MEDICINE.

REPORT OF PROCEEDINGS OF THE ILLINOIS STATE BOARD OF HEALTH.

The regular quarterly meeting of the Illinois State Board of Health was held in Chicago, at the Grand Pacific Hotel, on Thursday and Friday, April 17 and 18, 1884. Present—Newton Bateman, presiding; W. A. Haskell, A. L. Clark, R. Ludlam, W. R. McKenzie, John H. Rauch. The President called the Board to order Thursday at 10.30 A. M. The minutes of the previous meeting, January 17, were read and approved. Under the call for reports from officers, the Secretary presented the following quarterly report:

QUARTERLY REPORT OF THE SECRETARY, JAN 1—MARCH 31, 1884.

During the quarter ended March 31, 1884, there were received in the Secretary's office 615 communications, letters, reports, etc., exclusive of 183 diplomas submitted for verification, and the affidavits and other papers accompanying applications for certificates in nearly 200 cases. There were sent out, during the same period, 760 letters, postals, circulars, etc., and other communications, and the usual quantity of the Board's publications—reports, registers, preventable disease circulars, etc., of which 227 packages were sent by express. Eighty telegrams were received and one hundred and twenty-two sent.

Certificates, entitling to practice medicine and surgery under the Medical Practice Act, were issued to 152 graduates upon diplomas from legally chartered medical institutions in good standing.

Among these were a number issued to practitioners previously holding the certificates of the Board, issued after examination. There are now not to exceed 50 practitioners of this class in the State, who have not since graduated from a medical college, in accordance with the recommendations of the Board. To midwives, 12 certificates have been issued—6 upon diplomas or other recognized credentials, and

6 upon examination. There were, in all, 12 examined during the quarter, of whom 6 were rejected.

The Diplomas of 1883-84.

Applications based upon the diplomas issued at the close of the last session have been received from graduates of eleven different colleges, which have either failed to fully comply with the Schedule of Minimum Requirements of the Board, or against which charges have been received that such compliance has been perfunctory and insincere.

In eight of the cases where the colleges have failed to fully comply with the schedule, the applicants have signified their intention—in response to a suggestion to that effect—of submitting themselves to an examination by the Board on those subjects omitted by their respective schools.

They will present themselves at this meeting, and I recommend the adoption of this course with regard to the diplomas of that class of colleges.

During the month of March I spent two weeks visiting Eastern colleges, with reference to this matter, and was much gratified at the spirit manifested concerning the Board's efforts to improve the status of medical education, especially from the better class of colleges.

I regret not being able to devote more time to these personal visits. They are much more satisfactory and profitable than anything which can be accomplished by correspondence.

On the whole, there is every reason for encouragement in the results of the work thus far. One of the most satisfactory proofs of the timeliness and wisdom of the Board's action is found in the attitude of the graduates themselves. Expressions of approval from a very large number, and, as already stated, of a willingness to submit to an examination by the Board from others have been received.

PREVALENT DISEASES.

Small-pox has reappeared at a few points in the State, viz.: at Chicago—two cases—one from Cincinnati and one from Indianapolis; at Cairo and East St. Louis, several cases from the river; at Charlestown, Coles county, a tramp, said to be from the pineries of Wisconsin, or Michigan; at Coulterville, Randolph county, five cases among negroes, contracted from a negro roustabout. At the close of the quarter, an outbreak is also reported at Yorkville, Kendall county.

In all these cases (except Chicago) the rules and regulations of the Board, and necessary advice and instructions, printed and written, were at once furnished. These are now so well understood, and the community generally is so well protected by recent vaccination and revaccination, that there is no spread of the disease beyond the first case. Some sensational statements were made about the cases at Cairo, but investigation proved them to be unfounded.

Scarlet fever has been reported from a few localities, but not to such an extent as to warrant special mention.

THE CATTLE DISEASE.

On the 13th of March, the Board was appealed to by the State Board of Agriculture concerning information received that foot-and-mouth disease (epizootic aphtha) existed among cattle in Effingham county. Coupled with the reports of its existence in Kansas and elsewhere, the information demanded the most serious attention. Its highly contagious character, the rapidity of its spread, and the difficulty of eradicating the contagion, combine to render it one of the most dreaded of all the animal plagues, from an economic standpoint. It is estimated that the direct money loss from this disease to English stock-raisers in 1872 exceeded $65,000,000, and the average annual loss in France is computed at 5,000,000 francs for twenty successive years.

There is no legislation in this State concerning the disease, beyond the authority conferred upon the State Veterinarian to investigate contagious and infectious diseases among animals. But the power to condemn infected animals, to quarantine, or enforce otoer measures for the arrest of such diseases, and to prevent their spread, is limited specifically to pleuropneumonia or glanders.

In this emergency, it was evident that, if the disease really existed, it could only be dealt with through the State Board of Health by virtue of the powers and authority vested in it by the second section of the act of May 25, 1877. Steps were, therefore, taken to ascertain the foundation for the reports; the State Veterinarian was dispatched by the Governor to Effingham county, and subsequently to a number of other points.

Professors Morrow and Prentice also visited herds in various localities, said to be infected.

Meanwhile, I had consulted with Dr. E. P. Salmon, the chief veterinarian of the Department of Agriculture at Washington, and had carefully studied and compared all the reports of the disease from the several localities, and finally arrived at the conclusion—subsequently confirmed by the veterinary experts—that the disease existing in Illinois, Iowa, Missouri, Kansas, and Nebraska, was not foot-and-mouth disease.

SANITARY COUNCIL.

The sixth annual meeting of the Sanitary Council of the Mississippi Valley was held in Memphis, Tenn., on the 21st of March. Beyond the reception of the reports of officers and committees and the transaction of the usual routine business, nothing of importance was attempted. The object of the meeting was merely to keep the organization in readiness for action should an emergency arise requiring its intervention. A resolution was adopted, thanking the Executive Committee for its labors during the season of 1883, approving its course and instructing it to adopt, if necessary, the same line of action in regard to the prevention of the introduction of yellow-fever, or other infectious disease, into the Mississippi Valley during the year 1884.

Recent changes in the personnel of some of the most important sanitary organizations originally represented in the Council, are cause for congratulation, and for the first time in many years there is now

good reason to believe that all Boards of Health, State and local, in the Valley, will act as a unit.

Respectfully submitted,

JOHN H. RAUCH, Sec.

On motion of Dr. Clark, at the conclusion of the reading, the report was accepted and ordered placed on file.

The Secretary made an informal supplementary statement regarding his action on applications for certificates, based on the diplomas of the session of 1883–84. On motion of Dr. McKenzie, the action of the Secretary was approved.

Fifteen candidates presented themselves for examation, among them being six graduates of colleges which had not fully complied with the Board's schedule, and whom it was proposed to examine only on the subjects omitted, namely, preliminary education and hygiene.

At 11 o'clock, on motion of Dr. Clark, the Board went into executive session for the examination of sundry cases concerning colleges and individuals, representatives of three colleges being in attendance, and desirous of a speedy hearing.

At 1 o'clock, P. M., the Board took an hour's recess for dinner, and at 3 o'clock, after having transacted sundry routine business, the executive session was resumed and continued until 6 o'clock, when the session was adjourned to Friday morning.

FRIDAY, APRIL 18, 9:30 A. M.

The Board met, pursuant to adjournment, present as before. The Secretary presented the correspondence and other papers in a large number of cases, which occupied the attention of the Board during the remaining hours of the session.

The Secretary was authorized to attend the proposed conference of representatives of State Boards of Health, to be held in Washington, D. C., during the meeting of the American Medical Association.

In the case of Dr. W. W. Bower, of Mt. Sterling, Brown County, charged with being identified with the "American Anthropological University of St. Louis," the Secretary was instructed to forward Dr. Bower's denial and explanation to the Hon. John Eaton, Commissioner of Education, by whom the charge was laid before the Board, and to request of General Eaton that he forward any evidence in his possession, tending to prove that said Bower was concerned in the sale of the diplomas of the so-called university.

The Auditing Committee reported that it had examined and approved of bills for the current quarter, amounting to $2,664.80, and recommended that the same be paid.

The Secretary reported that only two of the candidates who had undergone the full examination, had attained the required percentages entitling them to pass, and that both of these were men who already held diplomas from medical colleges.

At 8 o'clock, P. M., the Board adjourned.

THE Missouri State Medical Society adjourned to meet in Sedalia, Mo., May 13th, 1884. The *Medical Review* says the date has been changed to the 20th by order of the President.

BOOK REVIEWS.

A TREATISE ON PHARMACY: Designed as a Text-Book for the Student, and as a Guide for the Physician and Pharmacist, containing the Officinal and many Unofficinal Formulas, and numerous Extemporaneous Prescriptions. By EDWARD PARRISH, late Professor of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy, etc. Fifth edition, enlarged and thoroughly revised, by Thos. S. Wiegand. With 256 Illustrations.

This work has long been indispensable to the practical pharmacist, as well as the student of pharmacy, and is a valuable reference book for the physician. This new edition, the fifth, has been rendered necessary, not alone by the progress of science, but also by the late revision of the U. S. Pharmacopœia. All the new preparations of the pharmacopœia have been embodied in the work, together with all essential tests, and the improved system of weights and measures. The syllabi, which have proved such a valuable features of previous editions, and upon which Prof. Maisch bestowed so much care, are retained in this edition.

The first five chapters of this treatise are devoted to subjects introducing to a study of pharmaceutical processes proper. The first two chapters appropriately treat of the proper arrangement of a dispensing store and laboratory. The chapters devoted to pharmaceutical chemistry and Galenical pharmacy embrace the technique of the science of pharmacy. The portion of this treatise in which physicians will be most interested, is part VII, entitled, extemporaneous pharmacy. This part treats of prescriptions and the art of selecting and combining remedies. The appendix to this part treats of the management of a sick chamber; the preparations used as articles of diet for the sick; physicians' outfits; and some recipes of important popular remedies. While the suggestions, intended for the laity, upon the management of the sick chamber, are most excellent, we are at a loss to understand the reasons which determined the editor's choice of such subjects for consideration in a text-book on pharmacy. While directions for the preparation of arrow-root, tapioca, and beef-essence find an appropriate place in such a treatise, one is at a loss to find the relevancy of directions for deportment around the dying-bed upon the preceding page. The chapter on Elixirs is both interesting and instructive, and contains some new formulæ of much popularity. This book is amply illustrated, and the paper, printing and binding, are expressive of the best modern typography. Indeed, the mechanical execution of the book is faultless.

A DISCONSOLATE looking doctor on meeting a Hibernian friend attributed his sorrow to the fact that he had just returned from his vacation and found his wife in bed with cerebro-spinal-meningitis. "Holy Moses," says Pat, "and why didn't yees shoot the Oitalian scoundrel?"—*Medical Age.*

FOREIGN CORRESPONDENCE.

PARIS, APRIL 4, 1884.

Dr. Debove, one of Professor Seé's most zealous disciples, has implicit faith in the bacillary theory of tuberculosis as propounded by Professor Koch, of Berlin. During the summer session of last year, Dr. Debove was appointed, on the death of Professor Lasèque, to fill, *pro tem*, the chair of Clinical Medicine at "La Pitie" hospital, when he delivered a series of lectures, by which he endeavored to demonstrate the parasitic origin of pulmonary tuberculosis, and the conclusions to be derived therefrom as regards the ætiology, diagnosis, and treatment of this affection. According to Dr. Debove, the bacillus is the characteristic element of the tubercle, which definitively settles the question as to the unity of phthisis; moreover, as this same bacillus is found in the greater part of the lesions which have up till now been put down for scrofulous, it follows that the term scrofula should be expunged from the nosological table as it exists in the standard works of the day. The contagiousness of pulmonary phthisis, which has been admitted for some time, has become a fact intimately associated with the parasitic doctrine, without our being able to define precisely the means by which the parasite enters the body, nor the individual organic modifications, hereditary or acquired, which favor or check its development. And yet it is these modifications that it would be necessary to know exactly in order to establish in a rational manner the prophylactic treatment of phthisis. As regards curative treatment, Dr. Debove has not much confidence in the utility of drugs, nor yet in the climatic treatment of the disease, his sheet anchor being hyperalimentation, or, more properly speaking, artificial feeding.

Dr. Debove was led to adopt this method of treatment on the grounds that anorexia was not so frequently as has been represented, an initial symptom of tuberculosis; but, on the contrary, it is anorexia that frequently leads to phthisis. He therefore asks that whether in suppressing the cause, the effects will not be also suppressed, and whether, in consequence, by an abundant alimentation, the progress of the affection would not be checked. This he proposed to effect by feeding the patient by means of a soft India rubber tube, with a funnel attached to the superior extremity. But as nitrogenous material would constitute the principal element in the diet of phthisical patients, it would be necessary to compose a mixture that would pass easily through the tube, and be as digestible as possible. With this view, a mixture composed of milk, or beef tea and raw eggs, including the white and yellow parts, to which may be added some raw meat finely chopped up, or better still, powdered meat. Dr. Debove commences by administering a mixture composed as follows: 25 grammes of powdered meat, 1 egg, and ½ a litre of milk or beef-tea, which he gradually increases to 3 litres of milk or beef-tea, or 6 to 12 eggs, and 300 grammes of powdered meat in 3 meals. He recommends that not more than 1 litre should be introduced into the stomach at a time. He considers the washing out of the stomach unnecessary, and abstains from every other form of medication, excluding even cod-liver oil. In case of severe diarrhœa, however, he administered bismuth and opium.

Dr. Debove adopts this method in all the stages of the disease, that is, of pulmonary tuberculosis, and in all the cases in which he has succeeded in feeding the patient in the manner above described, he noticed a series of phenomena which were constantly produced: the vomiting ceased, digestion was perfectly performed, the sweats disappeared, the dyspnœa was relieved, the strength returned, the evening fever abated, the cough and expectoration were diminished, and the weight of the patient increased. One circumstance was particularly noticed, that is, the vomiting of the alimentary substances introduced by the tube was altogether exceptional, and when the patient had been troubled with repeated and obstinate vomiting, excited by paroxysms of coughing, the vomiting was checked, the diarrhœa ceased, and the appetite returned. This method of treatment should be continued for some time, and after it has been considered necessary to stop it, the patient should continue to feed himself with powdered meat, about 100 grammes in one meal, for some months longer, and in addition to his other repasts. But notwithstanding the favorable results obtained by this method of hyperalimentation, the prognosis of the cases so treated by Dr. Debove and others in this way does not seem to be more promising than that of those treated by the ordinary methods, as Dr. Debove himself asserts that one cannot hope to guarantee a tuberculous subject, when once cured, against a subsequent attack. All that one can do is, to check the progress of the present attack, and thus permit the lesions to cicatrize.

The contra-indications of this method of treatment are: the greatly advanced lesions, for one cannot hope to do much with a patient whose intestines are affected with extensive ulcerations which are manifested by an obstinate diarrhœa of long standing. As for the state of the lungs, this is less a question of degree than one of extensiveness. In a patient whose lungs are studded with tubercles, one can only hope to prolong his existence by a little. In the acute forms of the malady, the method is powerless. The same is the case when there is high and continued fever, indicating the progressive course of the lesions. The treatment is more successful with chronic cases. The earlier the remedy is applied, that is to say, at the commencement of the first manifestation of the malady, the cure would be more hopeful and rapid than if adopted at a later stage.

Encouraged by the success obtained by this method of treatment, Dr. Debove was induced to apply it to other cases of anorexia and cachexia, and with satisfactory results. Judging by analogy, the author considered that the method might with advantage be employed in chronic cases of pneumonia and hysterical subjects who frequently refuse all food, or if any is taken, it is vomited up. Dr. Debove considers that in certain affections of the stomach, albuminuria, and in chronic dysentery, where milk may not be

well borne, the powder of milk administered in this way will render great service. In certain surgical affections also, in which the surgeon may hesitate to operate owing to the debilitated condition of the patient, this method of hyperalimentation, or artificial feeding, will be found highly serviceable.

A. B.

DOMESTIC CORRESPONDENCE.

ACTION OF ALCOHOL.

TO THE EDITOR:—

In the last issue of your valuable journal, a somewhat brief synopsis of a clinical lecture delivered by me, served as the basis of an editorial notice, that, though accepted by me with all the meekness that should characterize the bearing of a junior hearkening to the voice of a "father in Israel," bears within it a few elements of error.

In speaking of the combustible power of alcohol, as compared with that of cod-liver oil, I instanced an experiment not unfamiliar to chemists of to-day, and which was no doubt familiar to Baron Liebig. Indeed, we know that alcohol must be rich in heat-producing power, its chemical formula ($C_2 H_6 O$), ethyl hydrate, clearly justifying such an opinion. Its power in raising the temperature of water was referred to by me, and an application of the knowledge of this fact served in part to explain its action in the treatment of wasting diseases. This I did with the knowledge that the ablest authorities sustained me.

Previous to 1860, it was generally conceded by the profession that the greater portion of any alcohol taken into the system, was completely oxidized, only a small fraction being eliminated by the emunctories. In the year mentioned, Perrin and Lallemand endeavored to prove that nearly all the alcohol ingested was completely eliminated unchanged. But the whole matter has been so completely gone over by Anstie, Thudicum, and Dr. A. Dupré, that the investigations made in 1860 may be truly regarded as *passé*, in fact as well as in time. Dr. Dupré's observations, the most important of those made, may be summed up as follows: The amount of alcohol eliminated each day does not increase with the increase of alcoholic diet; and therefore, all the alcohol consumed daily must, of necessity, be disposed of daily. But since it is not eliminated within that time, it must be destroyed in the system. The amount of alcohol eliminated in both breath and urine, forms only a minute fraction of that taken into the system.

In the course of his experiments, Dupré found that after an abstinence of six weeks, on the part of those accustomed to the use of alcohol, and even in the case of one who did not use it in any form, a substance eliminated in the urine, and perhaps also in the breath, which, though apparently not alcohol, gave all the reactions ordinarily sought for in the detection of the minutest trace of that agent. The quantity of the material so closely simulating alcohol is so small, that its precise nature has not yet been determined. It is well to note in this connection, that the alcoholic material mentioned was considerably reduced during a period of alcoholic ingestion, only regaining its normal standard when the consumption of alcohol had for some days been abandoned.

It cannot be denied that on this subject there are conflicting views—what subject of medical study is entirely free from controversy? Yet the weight of evidence, both scientific and practical, goes to show that alcohol, in dietetic quantities, is retained and forms an aid to tissue construction. Bouchardat, Sandras and Duchek, conclude that alcohol is freely consumed in the body, little escaping by the urine, except where very large quantities are taken. Anstie, the authority quoted by yourself, is of opinion that the greater part of the alcohol ingested is consumed, though Parkes and Wollowicz believe that a considerable quantity escapes with the sweat and breath. Dupré's experiments, more recent than those of Anstie, prove that only a fractional part of alcohol escapes from the body, and Anstie says this never occurs but when narcotic doses are taken.

Thus it is shown that while in dietetic doses assimilation of alcohol may be complete, just as in any other form of nutriment, an excess of so highly diffusible and easily oxidized material, must as a matter of course, be thrown out of the system. The excess of nitrogen contained in animal food is subject to the same law.

The use of alcohol in every age and by every nation, since creation's dawn, demonstrates that it satisfies a natural instinct; that it literally refreshes the system exhausted by mental or physical labor, not only quickening the appetite for food and aiding the digestion, but sparing the digestive organs themselves, by limiting the amount of solid food otherwise required by the body. In short, it offers itself in the blood, as a substitute for the tissues that would be otherwise destroyed. "Alcohol," says Moleschott, is the savings bank of the tissues. He who eats little and drinks alcohol in moderation, retains as much in his blood and tissues as he who eats more and drinks no alcohol."

We may therefore conclude from the latest light given us upon this subject—and Anstie is not the latest illumination, by any means—that of any amount of alcohol taken, not in excess of the demands of the system, only a very minute proportion can be recovered from the secretions. The remainder evidently undergoes metamorphosis, and is eliminated in a new form. Hence, the doctrine that alcohol is a food, is true not only in a chemico-physiological sense, but in its more literal acceptation, inasmuch as it favors the formation of fatty products, especially noticeable in the increase of adipose tissue and by its well known tendency to produce fatty liver, kidney, and gall-stones if taken to excess.

Yours respectfully,

P. H. CRONIN, M.D.

N. W. Cor. North Clark and Oak streets.

INTERCOMMUNICATION OF STATE MEDICAL SOCIETIES.

BY A. S. V MANSFELDE, M.D., ASHLAND, NEB., SECRETARY OF THE NEBRASKA STATE MEDICAL SOCIETY.

EDITOR JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Dear Doctor:—In my forthcoming report to the Nebraska State Medical Society, the following will occur:

In looking over the report of the Proceedings of our society, my attention was arrested by the following resolutions, incorporated in the report of the Committee on Foreign Correspondence, by its chairman, our efficient Corresponding Secretary, Dr. R. R. Livingston:

Resolved, That the President and two Secretaries of this Society are hereby empowered and required to designate suitable gentlemen, members of this Society, to represent all State medical societies with which this body has fraternal relations, and notify the proper officers of foreign societies of this action, requesting said foreign societies to designate suitable parties to represent this Society at their respective meetings, and that said foreign societies be requested to issue commissions to the gentlemen designated from our membership to represent them. The President and Permanent Secretary being hereby authorized to issue similar commissions to those gentlemen selected from the membership of foreign societies to represent this Society in their respective bodies.

Resolved, That the commissions provided for in the foregoing resolution shall clearly define the duties of the representative to whom the same shall be issued, and a failure to comply with the requirements of said duties, shall forfeit said commission.

Nowhere in the Proceedings following the one in which these resolutions are incorporated (the year 1877) could I find any recognition of these resolutions, and yet the great value of them, if properly executed, must be apparent to every one who has the success of his own society, the advancement of medical science, and fraternization of all physicians in the United States, at heart.

This is a very lucid example of the many instances strewn upon the pages of man's history, when suggestions of the utmost importance fall silently to the ground, for want of proper support, until some one less capable of hatching great ideas, but more ready to nurse them into maturity, stumbles on them, and again revives an interest in the project which they foster.

Gentlemen, the value of these resolutions, as it appears to my mental vision, is inestimable, wherever medical science has votaries who, not lost in their devotion to her, yet remember that they are men, with the qualities of the citizen, the husband and father, clothed also with the responsibilities of these prerogatives.

By no means, I take it, can the interests of the profession be so strongly united, and therefore made efficient, as by the manner of presentation suggested in the resolutions of your Corresponding Secretary.

I take the liberty to again present them to you; the Phœnix, born out of the ashes of the past, and ask your candid opinion, after due deliberation, whether this creature, born again, is not worthy your best and undivided attention?

In the forthcoming report of the Committee on Revision of the Constitution, I have asked that the following be inserted:

COMMITTEE ON FOREIGN CORRESPONDENCE.

This committee shall consist of duly accredited representatives (members of this Society) of the several State and Territorial Medical Societies.

They shall receive and review the Transactions of the societies whom they represent, and through their chairman, the Secretary of Foreign Correspondence, present annually a report of the advance in medicine made by said societies. They shall also report such other matters as their societies may wish to communicate to the Nebraska State Medical Society.

DUTIES OF THE REPRESENTATIVES OF FOREIGN SOCIETIES.

It shall be the duty of the representative of any foreign society to communicate all advances in matters medical and governmental made by his society during the year just past, as well as of all matters, of whatever kind, his society may wish to be brought to the notice of the Nebraska State Medical Society, to the Corresponding Secretary, as chairman of the Committee on Foreign Correspondence. And finally, the representative shall guard the interests of his society to the best of his ability, where and whensoever it is demanded.

Non-compliance with the obligation herein set forth, shall be followed by a prompt revokal of the commission held by said representative; after due notice is given to the society to whom he is accredited.

MEDICAL SERVICE ON OCEAN VESSELS.

TO THE EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Sir:—Infectious disease is the only foreign enemy which threatens, and may one day invade and decimate the United States.

The danger is not visionary. Small-pox and other zymotic fevers are practically endemic in many of the larger European cities, but being usually confined within narrow bounds, seldom excite public attention, yet there are times when, even in England, the pestilence stalks forth from the slums to scatter disfiguration and death among the wealthiest and the highest.

Why may it not do so here? New York sanitation is notoriously far from perfect. Lesser outbreaks are of frequent occurrence throughout the country, and since the conditions, atmospheric or otherwise, which occasionally break down all limitations of infection are more or less undetermined, who can question the possibility of our being brought face to face with the national disaster of an uncontrollable epidemic.

This much is certain: the present defective sanitary administration on ocean steamships offers an easy

ingress to infection, which existing quarantine arrangements are powerless to oppose.

When, as not unfrequently occurs, zymotic fever appears on ship-board during the trans-Atlantic passage, it is evident that many of the persons in such necessarily close proximity to the sufferer are likely to contract the disease unless efficient isolation and disinfection are immediately enforced. It is equally certain that when the period of incubation is unfulfilled at the time of disembarkation, neither will these persons have been of any inconvenience to the ship officials while on board, nor can the most careful examination at quarantine distinguish them from the healthy. They are therefore permitted to proceed to their various destinations, there to become centers of possibly indefinite dissemination.

That this actually happens, and frequently, is proven by the fact that almost every appearance of zymotic disease in any part of the United States is, as the present outbreak of small-pox at Easton, Penn., directly traceable to the recent advent of immigrants. The reasons are not far to seek: the medical officers of steamships are appointed by the owners without due regard to their fitness for the post, and are dependent upon persons whose first, if not only, care is to make the voyage with as little expense and inconvenience as possible; they are not allowed a particle of independent administrative authority in even the most purely sanitary matters, nor are they provided with the means necessary to combat disease; and lastly, many of the vessels employed are so constructed that the isolation of infected persons is absolutely impossible.

A recent example is from many points of view interesting: a steamer belonging to one of the reputedly safest trans-Atlantic lines arrived at this port some months ago with a saloon passenger on board suffering from small-pox, and shortly after arrival another case was discovered among the steerage. The vessel was granted *pratique*, discharged her passengers, returned to England, and in due course arrived here again with another consignment of passengers, and another case of small-pox; this time a steward who had served on the ship during a previous voyage, but who only developed symptoms of the disease 32 days after the former cases had been removed. There are persons, and apparently in authority, satisfied with the assumption that cases of infectious disease following thus closely one upon another are unfortunate coincidences for which no person may be held responsible. In the public interest, more careful inquiry would seem to be desirable. The interval of time precludes the possibility of this steward having been infected directly by either of the previous cases, or during his former stay in this city. It is highly improbable that he contracted the disease from an independent source at Liverpool, since small-pox was not prevalent there. Remaining is the choice of two equally unpalatable solutions: either the steamer was inefficiently disinfected after the removal of the first cases, and variolar germs surviving not less than sixteen days after the supposed disinfection (?) infected this man during the latter days of the eastward passage; or there were a succession of small-pox cases on board this vessel, which were not recognized or were intentionally concealed from the health officer of this port, and from the public. A visit to the ship strongly confirmed the last supposition.

The hospitals for infectious disease were situated not upon the upper deck, but between the decks, in the forward part of the vessel, opening off, and ventilated *exclusively* into, a covered-in passage running through the first-class saloon the entire length of the vessel. In fact, if the builders had set themselves the task of constructing and locating these hospitals so as to disseminate throughout the inhabited parts of the ship every germ of infection coming from within, such an end could scarce have been more skilfully attained. And this is not an isolated instance of total disregard of sanitary law on ocean steamers.

Within five months, dating from the 11th of January, 1882, no fewer than twenty vessels infected with small-pox entered the port of New York; upon four only was even partial quarantine enforced. The remaining sixteen were granted *pratique* as soon as the passengers and crews had been vaccinated. No doubt it was better to vaccinate than do nothing, but under the circumstances, vaccination cannot be regarded as protective, since it is admitted that it cannot even modify small-pox, previously contracted, unless it has been so timed that the maturation of the vaccine vesicle shall precede the period of variolous invasion.

The order by which the surgeons on trans-Atlantic steamships are required to vaccinate the steerage passengers within twenty-four hours after starting, is in most instances practically ignored, seldom complied with during the time named, and when attempted, with what results may be judged from the report of the health officer. One surgeon reported 200 vaccinations, of which not one proved successful, another 250, of which only two proved successful, and so on. But even if this order were carried out to the letter, it would be at best but a choice of evils, and I think the wrong one. That the medical officer of a crowded steamer should neglect other more pressing duties to vaccinate steerage passengers during the first day, or even days of the voyage, would be manifestly inexpedient for the general welfare. On other grounds it would be both cruel and unscientific; cruel as disturbing unnecessarily persons already miserable, many of whom would be in the throes of sea-sickness and might claim at least to be let alone; unscientific, and calculated to discredit this most valuable of prophylactics, as challenging an epidemic of erysipelas under conditions combining to favor its development and spread.

Thus is quarantine administered, and thus is the United States sown with foreign infection, which will assuredly one day take root and flourish.

Is it wise to wait until the panic of that day shall call forth extreme precaution in measures repressive of convenient travel and healthful immigration.

Surely it were better that Congress should at once, by moderate legislation, guard the country against pestilence, and insure the protection of intending citizens during the ocean transit.

This may be done by (1) requiring all persons

coming to the United States to show evidence of having been vaccinated at least fourteen days previous to embarkation; (2) by insisting that the vessels carrying them shall provide proper hospital accommodation, and necessary assistance for the care of the sick; and (3) by establishing a competent service of marine medical officers, who, being entirely independent of interested influences, will see the law observed throughout the voyage, and will be responsible to Government for the faithful discharge of their duties, and intelligent coöperation with the quarantine authorities. I am, sir, your obedient servant,

J. A. ERWIN, M.A., Cambridge, Eng., M.D.,
Late Visiting Physician to the Manchester Southern Hospital for Women and Children,
April 19, 1884. 363 Fifth Av., N. Y.

ON REDUCTION OF DISLOCATIONS BY MANIPULATION.

APRIL 22, 1884.

Sir:—In reading the last edition of your JOURNAL, I was not a little surprised at your reference to my communication on the above-named subject, and I now trust that in a spirit of fairness you will give equal publicity to my reply. You have asserted that one of your motives for inserting my communication was to make it the occasion of correcting my erroneous views concerning the status of surgical progress in this country. In such a case, I think that your comments should have appeared in the same number of the JOURNAL, together with the article commented upon—whereas they failed to appear until two weeks afterwards—and this, to say the least, was somewhat lacking in courtesy, and entirely at variance with editorial custom.

In stating that manipulation was but little taught in schools, I based my belief on the information of several medical men here, with whom I had conversed on this subject—and this, together with the fact of the patient whose case *I* published, and who had been treated six times for a recent simple dislocation of the humerus by four or five different surgeons here, none of whom had employed manipulation, sufficiently warranted me in my assertion. During the five years I spent at the study of medicine in Dublin, where the standard of medical education is admittedly high and thorough, I remember there were only a few lectures delivered on this subject, and that in the instructions given by private teachers ("grinders" or "coachers" as they were familiarly yclept), it was very little dwelt upon—and I afterwards found that the same was the case in London. With regard to that part of my assertion concerning the text-books, I know that manipulation has been fully and ably dealt with in some few works, as in the one instanced—Prof. H. H. Smith's work on the Principles and Practice of Surgery—but these are not text-books, and reference to the well-known and generally read text-books on surgery of Druitt, Bryant, and Holmes will bear out my assertion that only a very fleeting notice indeed is awarded therein to the subject. Manipulation has been taught in almost all countries by a few individual professors, as in the United States, by Profs. Smith, Hodgen, and Brainerd, and in Great Britain and Ireland, by Messieurs. White, of Manchester, and Croly and Stokes, of Dublin, and a few others, but this is no proof whatever that manipulation is at all sufficiently taught, much less that "direct and full instruction" on the subject is generally given—and I trust I may be pardoned for still doubting that such is really the case.

In my communication I merely invited the attention of the editor and readers of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, to the subject of manipulation, which all will concur with me, is surely worthy of attention, and in doing so, I had no intention of raising an issue concerning the medical teaching here, nor of reflecting invidiously on the status of surgical progress in the United States, and I shall only add in conclusion, that I regret that any of my statements have been misunderstood, and I trust that this explanation will show that my communication was dictated, not by a spirit of alienation, bnt by a feeling of friendliness and coöperation.

M. M. LOUIS HUTCHINSON,
L.R.C.S., I.L.K.Q.C.P.I., ETC.

SPECIAL NOTICES.

ASHLAND, NEB., APRIL 14, 1884.

EDITOR JOURNAL AMERICAN MEDICAL ASSOCIATION, CHICAGO.

Dear Doctor:—The Nebraska State Medical Society will meet in annual session at 9 o'clock A. M., Tuesday, May 13, in the city of Omaha. Physicians in affiliation with the A. M. A., who may intend going West, are cordially invited to attend our meeting. Very truly yours,

A. S. V. MANSFELDE, Sec.

NECROLOGY.

BULLOCK, OTIS, M.D., of Warren, R. I., was the son of Dr. Samuel and Betsey Bullock, born in Sterling, Conn., Feb. 20, 1806; died of pneumonia, March 6, 1884. His father practiced medicine until about 80 years of age, in Rehoboth, Mass., where he died at the age of 92.

Dr. Bullock was for three years a student at Day's Academy, in Wrentham, Mass. He studied medicine with Dr. Usher Parsons, of Providence, who was surgeon of Perry's Flag Ship, at the battle of Lake Erie. He graduated at Harvard Medical College, in March, 1832. Dr. Bullock commenced practice in Warren, R. I., and for some years was a partner of Dr. Williams, the leading practitioner in the town, to whose practice he succeeded. He was a prominent and popular member of the Rhode Island Medical Society, and was rarely absent from a meeting. He was elected a Censor of the society in 1840, which position he held until his death, nearly forty-four years. He was elected President in 1866, and

served one year. He joined the American Medical Association in 1860. In 1836 he married Martha M. Randall, who died in 1837. In 1842 he married Elizabeth H. Saunders, who died in 1873. In 1875 he married Mary F. Collins, who, besides two sons, survive him. Dr. Bullock's remains were buried March 10, in South Cemetery, R. I.

W. E. S.

MISCELLANEOUS.

THE POPULAR VIEW OF PROTECTION AGAINST CONTAGIOUS GERMS.—A correspondent of the *Medical Times* says: "The wide-spread fear of contagious germs and the appreciation of the value of antiseptics seems to be more intense on the Continent than with us, if I may judge from what I saw and heard last year when on my travels. For example, the chance of inhaling tuberculous bacteria has been met by a sanitary spittoon, and the fear of absorbing poisonous matters at the other end of the body by antiseptic closet paper, both for use and placing on the seat. The former I met with in Germany under the name of 'Cellulose Closetpapier mit Salicylsäure getränkt,' and the latter in France as 'feuille hygienique de la siege des water-closets avant de sig assevir garantit de tout contact malsain et dangereux.'"

COPENHAGEN AND THE INTERNATIONAL MEDICAL CONGRESS OF 1884.—A writer in the *Lancet* gives under this head some very interesting information respecting Copenhagen. Thus, he tells us that the Danish language much resembles English, so much so that the Professor of English at the University of Copenhagen, himself an Englishman, considers the two languages to be merely two different dialects; the pronunciation is very different, but most educated Danes understand English and speak it pretty well, and in shops, restaurants, tram-cars, etc., Englishmen will often find people who understand them. Amongst well-known medical men of the past the following are worthy of mention: Ole Worm, who died in 1654, and was the first who described the ossicula intercalaria s. Wormania; Thomas Bartholin, who died in 1680, was the discoverer of the lymphatic vessels; Winslow, who died in 1760, was professor of anatomy in Paris, to which city he removed after his perversion to Roman Catholicism; Callisen, who died in 1824, was the first to perform colotomy in the left lumbar region, and Jacobsen, who died in 1843, was the first to construct a strong and useful instrument for lithotrity, and first described the tympanic nerve, which is therefore also called nervus Jacobsonii. Denmark also boasts of Oersted, the well-known discoverer of electro-magnetism.

Its (Copenhagen) university is more than four centuries old, and offers free education to all. The public lecturers are supported by the State, receiving an annual government grant. The private lecturers receive neither government grant, nor students' fees, but work entirely *honoris causâ*. There is a large, old building called "Regensen," which was built more than 200 years ago, where a hundred students live gratuitously, and receive, besides, a small grant of money every month. There are also smaller houses erected by private people for the same purpose. In addition, there are private and public funds to help the poorer students in the purchase of either books or instruments, such as microscopes, etc. The students usually enter the University at the age of eighteen and leave at the age of twenty-five. The female students of Denmark are as yet but few. They attend exactly the same lectures as the male students, and nothing is especially arranged for them. In Denmark nobody is allowed to practice as a medical man unless he has passed a certain examination at the University. The medical education is very thorough, and extends generally over six to eight years. The theoretical part is given at the University, the practical at the different hospitals, of which one, the Fredrichs Hospital, is connected with the University, so that its physicians and surgeons are always professors at the University. The medical student attends lectures on philosophy the first year, and then passes an examination on this subject. Besides preparing himself for this examination, he also studies chemistry, botany, zoölogy and natural philosophy, which are the subjects for the next examination, generally passed half a year or one year later. From this time begins the medical education proper, the students being in the hospitals as clerks and dressers during the morning, and attending lectures during the afternoon. Five to seven years after having entered the University the medical students pass examination in anatomy, with dissection, physiology, and pharmacology, and one year later the final examination in medicine and surgery, both theoretical and practical, in morbid anatomy, with necropsies, in midwifery, and medical jurisprudence, in which latter the candidate has to write a paper on a given subject. Ultimately the candidate must write a paper on some given medical, and another on some surgical, topic. He is allowed four hours for each. Much attention is paid to the practical education, the candidates being obliged to produce certificates of attendance at a certain number of hospital clinics. Every one who aspires to the rank of M.D. must prove his scientific knowledge by a work on some medical subject which is submitted to the Faculty of Medicine for approval. If accepted, it is then printed in book form, copies are distributed, and on a fixed day he must publicly defend his opinions against professors chosen specially by the University, and all others who may desire to enter the lists against him.

MATERIAL FOR CASTS.—Mr. Charles W. Cathcart, in the *Edinburgh Clinical and Pathological Journal*, has an article on the use of a composition as follows:

Strong, clear glue or gelatine	4 oz.
Glycerine	4 oz.
Water	1 oz.

He breaks the glue into small pieces, soaks for an hour in cold water, melts and adds to the warm glycerine. When thoroughly mixed, this substance can be poured into any mould, and when cool it is quite

tough and elastic. Its clear, brownish color is an objection which is overcome by oxide of zinc, 1 lb.; glycerine ½ lb.; glue 1 oz ; mix the glycerine and oxide of zinc, and add the glue melted. For a flesh tint add solution of burnt sienna rubbed up in glycerine, or of vermilion in glycerine.

This material cuts with something like the consistence of skin, is elastic, and and is tough enough to hold stitches. It may be used to illustrate certain plastic operations, such as hare-lip. In making casts it is not necessary to prepare the plaster mould, other than to see that it is perfectly dry. When cold it may be *pulled* out without fear. The cost per lb. is from 1s. 6d. to 2s., and the specimens keep well.

NEW BOOKS.

Chibrte Un cas extraordinaire d'héméralopie congenitale. Paris: Davy. 8vo., 44 pp.

Cornil et Babés. Note sur le siége des bactéries dans la variole, la vaccine et l'érysipéle Paris: Alcan-Lévy. 8vo., 6 pp.

Cravin, A. Etude clinique sur la montée du lait chez les nouvelles accouchés. Paris: Davy. 8vo., 64 pp.

Denarié, A. Contribution à l'étude de là syphilis cornienne, gomme de la cornée. Paris : A. Delahage et Lecrosnier. 8vo. 66 pp. et planche.

Desnos. Sur les différent degres d'altérations anatomiques des cordons médullaires postérieurs considéris dans leurs rapports avec la curabilité de l'atarie locomotrice. Paris: Alcan-Lévy. 8vo., 4 pp

Du Castel. Rapports sur les maladies régnantes fait à la Société médicale des hopitaux de Paris. Paris : Dumy et Cie. 8vo., 86 pp.

Eustache, G. Etude sur les lochées dans l'état normal et les états pathologiques. Paris: Delahage et Lecrosnier. 8vo., 136 pp.

Guérin. Principales affections de l'oreille, bruits, écoulement, surdité. 22d edition. Paris: Goupryet Jourdan. 18mo., 104 pp.

Hellen. De la pleurésie franche primitive et inflammatoire chez les vieillards. Paris: Davy. 8vo., 68 pp.

Horteloup. De l'uréthrotomie extreme contre les rétrécissements de l'uréthre. Paris: Coccoz. 8vo., 19 pp.

Lallemant, C. De la gangrene foudreyante spontanée des organes génitaux extremes de l'homme. Paris: Davy. 8vo., 46 pp.

Le Brigant. Essai sur la tuberculouse pulmonaire dans ses rapports avec l'alimentation. Paris: Davy. 8vo., 123 pp.

Lediberder. De la scarlatiné, sa nature et son traitement, Paris: Alcan-Lévy. 8vo., 8 pp.

Lubelski. De l'alcovlisme en Pologne. Paris: Bondet. 8vo., 12 pp.

Marry, J. De l'action antiseptique de sulfate decuivre en obstétrique; prophylaxie et thérapeutique des accidents infecteux des suites de couches. Paris: Davy. 8vo., 27 pp.

Martineau. Lecons sur la vaginite nou blennorhagique. Paris: Delahage et Lescrosnier. 8vo., 44 pp.

Martinet, A. De l'angine de poitrine rhumatismale (hypérémie du plexus cardiaque.) Paris : Delahage et Lecrosnier. 8vo., 94 pp.

Michaux, P. Contribution à l'étude du carcinome de la parotide. Paris: G. Masson. 8vo., xii, 90 pp.

Nicolas, A. Contribution à l'étude de l'arthrotomie antiseptique. Nancy: Sordrillet. 4to., 163 pp.

Menard, V. Contribution à l'étude des tumeurs blanches et des abcés froids dans leurs rapports avec l'infection tuberculeuse. Paris: Davy. 8vo., 136 pp.

Olive. Des formes cliniques de la colique hépatique. Paris: Davy. 8vo., 75 pp.

Patenostre, J. De l'identité de l'aptlerite puerpérale et d'une certaine forme d'arhtrite blennorrhagique. Paris: Davy. 8vo., 40 pp.

Phélippeaux. Note sur le mandrin trachéotome et sur le trachéotome à manche dilàtateur-conducteur (instrument nouveau). Paris: Lauwereyns. 8vo , 24 pp.

Poncel. De l'influence de la congestion chronique du foie dans la genése des maladies. Paris: A. Delahage et Lecrosnier. 8vo., 121 pp.

Simon, J. De la sclérose cérébrale chez les enfants. Paris: Lauwereyns. 8vo , 36 pp.

Sokoloff. Elytrorrhaphie médiane, on Elytrocleisis partialis mediana du docteur Neugebauer, comme moyen de traitement opératoire du prolapsus uterin complet. Paris: Lauwereyns. 8vo., 19 pp.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM APRIL 19, 1884, TO APRIL 25, 1884.

Hoff, John Van A., Captain and Assistant-Surgeon, to be relieved from duty at Alcateag Island, Cal., and to report to the commanding officer at Fort Mason, Cal., for duty as Post Surgeon. (Par 3, S. O. 45, Hdqrs. Dept. of Cal., April 16, 1884)

Porter, Joseph Y., Captain and Assistant-Surgeon, granted leave of absence for 2 months, to take effect about May 5, 1884. (Par. S. O. 38, Hdqrs. Division of the Missouri, April 19, 1884.)

Biart, Victor, Captain and Assistant-Surgeon, granted leave of absence for one year on surgeon's certificate of disability, with permission to leave the Division of the Missouri. (Par. 2, S. O 91, A G.O., April 19, 1884.)

La Garde, Louis A., Captain and Assistant-Surgeon, granted leave of absence for one month, with permission to apply for two months' extension. (Par. 1, S. O. 91, A.G O., April 19, 1884.)

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING APRIL 26, 1884.

P. A. Surgeon C T. Hibbett, ordered to U. S. Iron-clads, James River, Va.

P. A. Surgeon H Aulick, detached from Iron-clads and ordered to "New Hampshire"

P. A Surgeon W. S. Dixon, detached from "Hartford" and ordered to Coast Survey Str. "Hassler"

Pr A. Surgeon F. H. Terrill, detached from "Hassler" and ordered to "Hartford"

Surgeon J. C. Wise, detached from "New Hampshire" and placed on waiting orders.

Medical Inspector W. K. Schofield, appointed Medical Inspector on Active List.

P. A. Surgeon F. S. Nash, detached from Laboratory and ordered to "Alert" (Greely Relief Expedition).

P. A. Surgeon J. H. Hall, ordered before Retiring Board.

Medical Inspector H. C. Nelson, placed on Retired List.

P. A. Surgeon S. W. Battle, placed on Retired list.

P. A. Surgeon F. H. Terrill, resigned.

P. A. Surgeon J. M. Murray, ordered to "Minnesota."

served one year. He joined the American Medical Association in 1860. In 1836 he married Martha M. Randall, who died in 1837. In 1842 he married Elizabeth H. Saunders, who died in 1873. In 1875 he married Mary F. Collins, who, besides two sons, survive him. Dr. Bullock's remains were buried March 10, in South Cemetery, R. I.

W. E. S.

MISCELLANEOUS.

THE POPULAR VIEW OF PROTECTION AGAINST CONTAGIOUS GERMS.—A correspondent of the *Medical Times* says: "The wide-spread fear of contagious germs and the appreciation of the value of antiseptics seems to be more intense on the Continent than with us, if I may judge from what I saw and heard last year when on my travels. For example, the chance of inhaling tuberculous bacteria has been met by a sanitary spittoon, and the fear of absorbing poisonous matters at the other end of the body by antiseptic closet paper, both for use and placing on the seat. The former I met with in Germany under the name of 'Cellulose Closetpapier mit Salicylsäure getränkt,' and the latter in France as 'feuille hygienique de la siege des water-closets avant de sig assevir garantit de tout contact malsain et dangereux.'"

COPENHAGEN AND THE INTERNATIONAL MEDICAL CONGRESS OF 1884.—A writer in the *Lancet* gives under this head some very interesting information respecting Copenhagen. Thus, he tells us that the Danish language much resembles English, so much so that the Professor of English at the University of Copenhagen, himself an Englishman, considers the two languages to be merely two different dialects; the pronunciation is very different, but most educated Danes understand English and speak it pretty well, and in shops, restaurants, tram-cars, etc., Englishmen will often find people who understand them. Amongst well-known medical men of the past the following are worthy of mention: Ole Worm, who died in 1654, and was the first who described the ossicula intercalaria s. Wormania; Thomas Bartholin, who died in 1680, was the discoverer of the lymphatic vessels; Winslow, who died in 1760, was professor of anatomy in Paris, to which city he removed after his perversion to Roman Catholicism; Callisen, who died in 1824, was the first to perform colotomy in the left lumbar region, and Jacobsen, who died in 1843, was the first to construct a strong and useful instrument for lithotrity, and first described the tympanic nerve, which is therefore also called nervus Jacobsonii. Denmark also boasts of Oersted, the well-known discoverer of electro-magnetism.

Its (Copenhagen) university is more than four centuries old, and offers free education to all. The public lecturers are supported by the State, receiving an annual government grant. The private lecturers receive neither government grant, nor students' fees, but work entirely *honoris causâ*. There is a large, old building called "Regensen," which was built more than 200 years ago, where a hundred students live gratuitously, and receive, besides, a small grant of money every month. There are also smaller houses erected by private people for the same purpose. In addition, there are private and public funds to help the poorer students in the purchase of either books or instruments, such as microscopes, etc. The students usually enter the University at the age of eighteen and leave at the age of twenty-five. The female students of Denmark are as yet but few. They attend exactly the same lectures as the male students, and nothing is especially arranged for them. In Denmark nobody is allowed to practice as a medical man unless he has passed a certain examination at the University. The medical education is very thorough, and extends generally over six to eight years. The theoretical part is given at the University, the practical at the different hospitals, of which one, the Fredrichs Hospital, is connected with the University, so that its physicians and surgeons are always professors at the University. The medical student attends lectures on philosophy the first year, and then passes an examination on this subject. Besides preparing himself for this examination, he also studies chemistry, botany, zoölogy and natural philosophy, which are the subjects for the next examination, generally passed half a year or one year later. From this time begins the medical education proper, the students being in the hospitals as clerks and dressers during the morning, and attending lectures during the afternoon. Five to seven years after having entered the University the medical students pass examination in anatomy, with dissection, physiology, and pharmacology, and one year later the final examination in medicine and surgery, both theoretical and practical, in morbid anatomy, with necropsies, in midwifery, and medical jurisprudence, in which latter the candidate has to write a paper on a given subject. Ultimately the candidate must write a paper on some given medical, and another on some surgical, topic. He is allowed four hours for each. Much attention is paid to the practical education, the candidates being obliged to produce certificates of attendance at a certain number of hospital clinics. Every one who aspires to the rank of M.D. must prove his scientific knowledge by a work on some medical subject which is submitted to the Faculty of Medicine for approval. If accepted, it is then printed in book form, copies are distributed, and on a fixed day he must publicly defend his opinions against professors chosen specially by the University, and all others who may desire to enter the lists against him.

MATERIAL FOR CASTS.—Mr. Charles W. Cathcart, in the *Edinburgh Clinical and Pathological Journal*, has an article on the use of a composition as follows:

Strong, clear glue or gelatine	4 oz.
Glycerine	4 oz.
Water	1 oz.

He breaks the glue into small pieces, soaks for an hour in cold water, melts and adds to the warm glycerine. When thoroughly mixed, this substance can be poured into any mould, and when cool it is quite

tough and elastic. Its clear, brownish color is an objection which is overcome by oxide of zinc, 1 lb.; glycerine ½ lb.; glue 1 oz ; mix the glycerine and oxide of zinc, and add the glue melted. For a flesh tint add solution of burnt sienna rubbed up in glycerine, or of vermilion in glycerine.

This material cuts with something like the consistence of skin, is elastic, and and is tough enough to hold stitches. It may be used to illustrate certain plastic operations, such as hare-lip. In making casts it is not necessary to prepare the plaster mould, other than to see that it is perfectly dry. When cold it may be *pulled* out without fear. The cost per lb. is from 1s. 6d. to 2s., and the specimens keep well.

NEW BOOKS.

Chibrte Un cas extraordinaire d'héméralopie congenitale. Paris: Davy. 8vo., 44 pp.

Cornil et Babés. Note sur le siége des bactéries dans la variole, la vaccine et l'érysipéle Paris: Alcan-Lévy. 8vo., 6 pp.

Cravin, A. Etude clinique sur la montée du lait chez les nouvelles accouchés. Paris: Davy. 8vo., 64 pp.

Denarié, A. Contribution à l'étude de là syphilis cornienne, gomme de la cornée. Paris : A. Delahage et Lecrosnier. 8vo. 66 pp. et planche.

Desnos. Sur les différent degres d'altérations anatomiques des cordons médullaires postérieurs considéris dans leurs rapports avec la curabilité de l'atarie locomotrice. Paris: Alcan-Lévy. 8vo., 4 pp

Du Castel. Rapports sur les maladies régnantes fait à la Société médicale des hopitaux de Paris. Paris : Dumy et Cie. 8vo., 86 pp.

Eustache, G. Etude sur les lochées dans l'état normal et les états pathologiques. Paris: Delahage et Lecrosnier. 8vo., 136 pp.

Guérin. Principales affections de l'oreille, bruits, écoulement, surdité. 22d edition. Paris: Goupryet Jourdan. 18mo., 104 pp.

Hellen. De la pleurésie franche primitive et inflammatoire chez les vieillards. Paris: Davy. 8vo., 68 pp.

Horteloup. De l'uréthrotomie extreme contre les rétrécissements de l'uréthre. Paris: Coccoz. 8vo., 19 pp.

Lallemant, C. De la gangrene foudreyante spontanée des organes génitaux extremes de l'homme. Paris: Davy 8vo., 46 pp.

Le Brigant. Essai sur la tuberculouse pulmonaire dans ses rapports avec l'alimentation. Paris: Davy. 8vo., 123 pp.

Lediberder. De la scarlatiné, sa nature et son traitement, Paris: Alcan-Lévy. 8vo., 8 pp.

Lubelski. De l'alcovlisme en Pologne. Paris: Bondet. 8vo., 12 pp.

Marry, J. De l'action antiseptique de sulfate decuivre en obstétrique; prophylaxie et thérapeutique des accidents infecteux des suites de couches. Paris: Davy. 8vo., 27 pp.

Martineau. Lecons sur la vaginite nou blennorhagique. Paris: Delahage et Lescrosnier. 8vo., 44 pp.

Martinet, A. De l'angine de poitrine rhumatismale (hypérémie du plexus cardiaque.) Paris : Delahage et Lecrosnier. 8vo , 94 pp.

Michaux, P. Contribution à l'étude du carcinome de la parotide. Paris: G. Masson. 8vo., xii, 90 pp.

Nicolas, A. Contribution à l'étude de l'arthrotomie antiseptique. Nancy: Sordrillet. 4to., 163 pp.

Menard, V. Contribution à l'étude des tumeurs blanches et des abcés froids dans leurs rapports avec l'infection tuberculeuse. Paris: Davy. 8vo., 136 pp.

Olive. Des formes cliniques de la colique hépatique. Paris: Davy. 8vo., 75 pp.

Patenostre, J. De l'identité de l'aptlerite puerpérale et d'une certaine forme d'arhtrite blennorrhagique. Paris: Davy. 8vo., 40 pp.

Phélippeaux. Note sur le mandrin trachéotome et sur le trachéotome à manche dilàtateur-conducteur (instrument nouveau). Paris: Lauwereyns. 8vo , 24 pp.

Poncel. De l'influence de la congestion chronique du foie dans la genése des maladies. Paris: A. Delahage èt Lecrosnier. 8vo., 121 pp.

Simon, J. De la sclérose cérébrale chez les enfants. Paris: Lauwereyns. 8vo , 36 pp.

Sokoloff. Elytrorrhaphie médiane, on Elytrocleisis partialis mediana du docteur Neugebauer, comme moyen de traitement opératoire du prolapsus uterin complet. Paris: Lauwereyns. 8vo., 19 pp.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM APRIL 19, 1884, TO APRIL 25, 1884.

Hoff, John Van A., Captain and Assistant-Surgeon, to be relieved from duty at Alcateag Island, Cal., and to report to the commanding officer at Fort Mason, Cal., for duty as Post Surgeon. (Par 3, S. O. 45, Hdqrs. Dept. of Cal., April 16, 1884)

Porter, Joseph Y., Captain and Assistant-Surgeon, granted leave of absence for 2 months, to take effect about May 5, 1884. (Par. S. O. 38, Hdqrs. Division of the Missouri, April 19, 1884.)

Biart, Victor, Captain and Assistant-Surgeon, granted leave of absence for one year on surgeon's certificate of disability, with permission to leave the Division of the Missouri. (Par. 2, S. O 91, A G.O., April 19, 1884.)

La Garde, Louis A., Captain and Assistant-Surgeon, granted leave of absence for one month, with permission to apply for two months' extension. (Par. 1, S. O. 91, A.G O., April 19, 1884.)

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING APRIL 26, 1884.

P. A. Surgeon C T. Hibbett, ordered to U. S. Iron-clads, James River, Va.

P. A. Surgeon H Aulick, detached from Iron-clads and ordered to "New Hampshire"

P. A Surgeon W. S. Dixon, detached from "Hartford" and ordered to Coast Survey Str. "Hassler"

Pr A. Surgeon F. H. Terrill, detached from "Hassler" and ordered to "Hartford"

Surgeon J. C. Wise, detached from "New Hampshire" and placed on waiting orders.

Medical Inspector W. K. Schofield, appointed Medical Inspector on Active List.

P. A. Surgeon F. S. Nash, detached from Laboratory and ordered to "Alert" (Greely Relief Expedition).

P. A. Surgeon J. H. Hall, ordered before Retiring Board.

Medical Inspector H. C. Nelson, placed on Retired List.

P. A. Surgeon S. W. Battle, placed on Retired list.

P. A. Surgeon F. H. Terrill, resigned.

P. A. Surgeon J. M. Murray, ordered to "Minnesota."

OFFICERS OF

THE AMERICAN MEDICAL ASSOCIATION

AND OF ITS SEVERAL SECTIONS 1883-4.

PRESIDENT.

Dr. AUSTIN FLINT, SR., of New York.

FIRST VICE-PRESIDENT.

Dr. R. A. Kinloch, Charleston, S. C.

SECOND VICE-PRESIDENT.

Dr. T. B. Lester, Kansas City, Mo.

THIRD VICE-PRESIDENT.

Dr. A. L. Gihon, United States Navy.

FOURTH VICE-PRESIDENT.

Dr. S. C. Gordon, Portland, Maine.

PERMANENT SECRETARY.

Dr. Wm. B. Atkinson, 1400 Pine St., Philadelphia.

TREASURER.

Dr. R. J. Dunglison, Philadelphia.

LIBRARIAN.

Dr. C. H. A. Kleinschmidt, Washington, D. C.

Place of meeting, 1884, Washington, D. C.; Time of holding meeting, first Tuesday in May.

CHAIRMAN COMMITTEE OF ARRANGEMENTS.

Dr. A. Y. P. Garnett, Washington, D. C.

ASSISTANT SECRETARY.

Dr. D. W. Prentis, Washington, D. C.

BOARD OF TRUSTEES FOR JOURNALIZING THE TRANSACTIONS.

Drs. J. M. Toner, Washington, D. C., President;
M. Moore, Rochester, N. Y.; Leartus Conner, Detroit, Mich.;
J. H. Packard, Philadelphia, Secretary;
H. F. Campbell, Augusta, Ga.; A. Garcelon, Lewiston, Me.;
P. O. Hooper, Little Rock, Ark.;
L. S. McMurtry, Danville, Ky.; J. H. Hollister, Chicago, Ill.

OFFICERS OF THE SECTIONS:

"Practice of Medicine."

Chairman—Dr. John V. Shoemaker, Philadelphia, Pa.;
Secretary—Dr. W. C. Wile, Sandy Hook, Conn.

"Obstetrics and Diseases of Women."

Chairman—Dr. T. A. Reamy, Cincinnati, Ohio; Secretary—Dr. J. T. Jelks, Hot Springs, Ark.

"Surgery and Anatomy."

Chairman—Dr. C. T. Parkes, Chicago, Ill.; Secretary—Dr. A. O. Walker, Detroit, Mich.

"Ophthalmology, Otology and Laryngology."

Chairman—Dr. J. F. Chisolm, Baltimore, Md.;
Secretary—Dr. J. L. Thompson, Indianapolis, Ind.

"Diseases of Children."

Chairman—Dr. Wm. Lee, Baltimore, Md.; Secretary—Dr. W. R. Tipton, Las Vegas, N. M.

"Oral and Dental Surgery."

Chairman—Dr. T. W. Brophy, Chicago, Ill.; Secretary—John S. Marshall, Chicago, Ill.

"State Medicine."

Chairman—Dr. Deering J. Roberts, Nashville, Tenn.;
Secretary—C. W. Franzoni, Washington, D. C

Committee on "Necrology."

Chairman—Dr. J. M. Toner, Washington, D. C.